2.2

REMOVAL PROGRAM
PRELIMINARY ASSESSMENT/
SITE INVESTIGATION
FOR
REEF (BURT COMPANY) SITE
PORTLAND, MAINE

Prepared for:

U.S. Environmental Protection Agency
Region I
60 Westview Street
Lexington, MA 02173

CONTRACT NO. 68-W0-0036

TAT 01-N-00800

TDD #01-9103-14

Prepared By:

ROY F. WESTON, INC.
Technical Assistance Team
Region I

April 1991

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EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT

SITE NAME AND LOCATION

SITE NAME: REEF SITE (formerly BURT COMPANY SITE)

STREET, ROUTE NO. OR LOCATION IDENTIFIER: 1 CAMBRIDGE STREET | TOWN: PORTLAND

COUNTY: CUMBERLAND COUNTY | STATE: MAINE

☒ ATTACHED USGS MAP OF LOCATION PORTLAND, MAINE - WEST QUAD

SITE STATUS: ☐ NPL ☐ NON-NPL ☐ RCRA ☐ TSCA ☐ ACTIVE ☒ ABANDON
☐ OTHER

SITE ID #:

REFERRAL

☐ CITIZEN ☐ CITY/TOWN ☒ STATE ☐ PREREMEDIAL ☐ RCRA
☐ OTHER

NAME OF REFERRING PARTY: DENISSE MESSIER

ADDRESS: MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (ME DEP) | PHONE #: (207) 289-2651

CONTACTS IDENTIFIED:

A. STEVE ELFEMIA - ME DEP RESPONSE PHONE #: (207) 879-6300

B. CLAYTON MAYBEE - ME DEP - SITES PHONE #: (207) 289-8552

C. _____ PHONE #: ( )

D. _____ PHONE #: ( )

SOURCE OF INFORMATION

☒ VERBAL TELEPHONE CONVERSATIONS WITH ME DEP

☒ REPORT ME DEP MEMORANDUM - PRELIMINARY ASSESS. BURT CO. DECEMBER 11, 1990

☐ OTHER

POTENTIAL RESPONSIBLE PARTIES

OWNER: NORMAN S. REEF	ADDRESS: 66 PEARL STREET
PHONE #: (207) 774-6171	PORTLAND, MAINE
~~OPERATOR:~~ RAYMOND REEF	ADDRESS: 197 PORTLAND STREET
PHONE #: ~~(207)~~ (617) 723-1750	BOSTON, MASSACHUSETTS
SOURCE: ME DEP AND PROPERTY DEED	

EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT

SITE ACCESS

☐ OBTAINED ☒ VERBAL
☐ NOT OBTAINED ☐ WRITTEN

DATE: 4/4/91
AUTHORIZING PERSON: RAYMOND REEF
PHONE #: (617) 723-1750

PHYSICAL SITE CHARACTERIZATION

BACKGROUND INFORMATION (INCLUDE SITE DESCRIPTION, TOPOGRAPHY, AND PRIOR USES):

THE SITE IS AN ABANDONED BILLIARD BALL/POKER CHIP FACTORY THAT HAS BEEN VANDALIZED. THE ME DEP CONDUCTED A REMOVAL TO CLEAN UP DYES, PIGMENTS AND LEAD MONOSILICATE. SITE IS LOCATED ON A FLAT LOT, PORTION OF LOT IS FILLED WETLAND, SMALL STREAM FLOWS ACROSS THE SITE. OVERPACK DRUMS, CONTAMINATED SOIL AND SUBSTANCES IN BURNED BUILDING REMAIN ON SITE.

DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN OR ALLEGED:

LEAD MONOSILICATE – WHITE POWDER
PIGMENTS AND DYES USED IN MANUFACTURING PROCESS
FUEL OIL STORAGE TANKS – CONTENTS UNKNOWN
POSSIBLY ASBESTOS CONTAINING MATERIALS (ACM)
UNKNOWN LIQUIDS IN SMALLER CONTAINERS LOCATED IN OVERPACK DRUMS

EXISTING ANALYTICAL DATA

IDENTIFY SOURCE, DATE AND METHODOLOGY.

☐ REAL-TIME MONITORING DATA NA–

☒ SAMPLING DATA ME DEP, SOIL SAMPLING, 3/27/90, 5/30/90 AND 9/20/90 – METALS ANALYSIS BY SEVERAL METHODS CADMIUM – 4200 mg/kg, CHROMIUM – 46,000 mg/kg, BARIUM 92000 mg/kg.

POTENTIAL THREAT

DESCRIPTION OF POTENTIAL HAZARDS TO ENVIRONMENT AND/OR POPULATION – IDENTIFY ANY OF THE CRITERIA FOR A REMOVAL ACTION (FROM NCP) THAT MAY BE MET BY THE SITE: 40 CFR 300.415 REMOVAL ACTION (b)(2)(i) POTENTIAL EXPOSURE TO HUMANS, ANIMALS OR FOOD CHAIN FROM HAZARDOUS CONTAMINANTS, (b)(2)(ii) POTENTIAL CONTAMINATION OF DRINKING WATER SUPPLIES OR SENSITIVE ECOSYSTEMS, (b)(2)(iii) HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS IN DRUMS, BARRELS, TANKS OR OTHER BULK STORAGE CONTAINERS, THAT MAY POSE A THREAT OF RELEASE, (b)(2)(iv) HIGH LEVELS OF HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS IN SOILS LARGELY AT OR NEAR THE SURFACE THAT MAY MIGRATE, (b)(2)(vii) THREAT OF FIRE OR EXPLOSION, (b)(2)(viii) THE AVAILABILITY OF OTHER FEDERAL OR STATE RESPONSE MECHANISMS TO RESPOND TO THE RELEASE

EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT

PRIOR RESPONSE ACTIVITIES

☐ PRP ☒ STATE ☐ FEDERAL ☐ OTHER

BRIEF DESCRIPTION: THE ME DEP CONTRACTED TO HAUL & REMOVAL OF THE LEAD MONOSILICATE, MATERIALS CONTAMINATED WITH PYES AND PIGMENTS AND REMOVAL OF USUALLY CONTAMINATED SOIL MATERIALS WERE PLACED IN OVERPACK DRUMS (180) AND A LARGE SOIL STOCKPILE.

PRIORITY FOR SITE INVESTIGATION

☒ HIGH ☐ MEDIUM ☐ LOW ☐ NONE

COMMENTS: STATE REQUEST FOR ASSISTANCE WITH REPORTS OF VANDALISM AND UNSECURE LOCATION OF OVERPACK DRUMS.

REPORT GENERATION

INITIATOR OF REPORT: TIMOTHY C. JONES

DATE OF PREPARATION: 4/9/91

AFFILIATION: WESTON TAT | PHONE #: (617) 229-6430

EPA REGION I
REMOVAL SITE INVESTIGATION

INSPECTION INFORMATION

SITE NAME: REEF SITE	ADDRESS: 1 CAMBRIDGE STREET	
formerly BURT COMPANY		
COUNTY: CUMBERLAND	TOWN: PORTLAND	STATE: MAINE
DATE OF INSPECTION: 4/5/91	TIME OF INSPECTION: 0930 – 1500 hrs	
WEATHER CONDITIONS: SUNNY WARM, TEMPERATURE 70°F		
SITE STATUS AT TIME OF INSPECTION: ☐ ACTIVE ☒ INACTIVE	COMMENTS: SITE BUILDINGS ARE DAMAGED BY FIRE AND BY VANDALISM	

AGENCIES PERFORMING INSPECTION:

☑ EPA	NAMES: MARY ELLEN STANTON	PROGRAM: EMERGENCY PLANNING AND RESPONSE BRANCH
☑ EPA CONTRACTOR SUPPORT	NAMES: TIMOTHY JONES THOMAS SACCOCCIO	FIRM: ROY F. WESTON, INC TECHNICAL ASSISTANCE TEAM
☑ STATE	NAMES: STEPHEN EUFEMIA SCOTT CYR	PROGRAM: EMERGENCY RESPONSE SITE INVESTIGATIONS
☐ OTHER	NAMES:	ORGANIZATION:

CURRENT OWNER BASED ON DEED STATUS: NORMAN AND RAYMOND REEF	BOOK # 8279 PAGE # 0185
CURRENT OWNER BASED ON FIELD INTERVIEW: NA	VERBAL CHECK AT DESK: NA

PHYSICAL SITE CHARACTERISTICS

PROVIDE SITE SCHEMATIC – SEE ATTACHMENT 1

	QUANTITIES/EXTENT		QUANTITIES/EXTENT
☐ CYLINDERS		☒ PILES	SOIL STOCKPILE FROM ME DEP REMOVAL
☒ DRUMS	172 OVERPACKS FROM ME DEP REMOVAL	☒ STAINED SOIL	IN SOIL STOCKPILE
☐ LAGOONS		☐ SHEENS	
☐ TANKS – ☒ ABOVE	SEVERAL FUEL OIL TANKS	☐ STRESSED VEGETATION	
☐ TANKS – ☐ BELOW		☐ LANDFILL	
☒ ASBESTOS	SEVERAL PIECES OF PIPE INSULATION	☒ POPULATION WITHIN VICINITY OF SITE	LOCATED WITHIN 100' OF RESIDENTIAL AREA (THICKLY SETTLED)
☐ OTHER		☐ WELLS	
		☐ OTHER	

EPA REGION I
REMOVAL SITE INVESTIGATION

PHYSICAL SITE OBSERVATIONS

COMMENTS: OVERPACK DRUMS STAGED ON SITE AND CONTAMINATED SOIL STOCKPILED SEVERAL DRUMS OF PIGMENT/DYES OBSERVED IN FIRE DAMAGED BASEMENT, SEVERAL FUEL OIL TANKS ON SITE - CONTENTS UNKNOWN.

CONTAINMENT OF MATERIALS: STATE REMOVAL HAS SECURED THE MAJOMITY OF MATERIALS - NO COVER OVER PILE OF CONTAMINATED SOIL

RECEPTORS

- ☐ GROUND WATER/DRINKING WATER SOURCE — ☐ PRIVATE / ☐ MUNICIPAL
- ☒ UNRESTRICTED ACCESS TO SITE - EVIDENCE OF VANDALISM ON SITE
- ☒ POPULATION IN PROXIMITY TO SITE THICKLY SETTLED AREA WITHIN 100 FEET
- ☐ SENSITIVE ECOSYSTEM
- ☐ OTHER

FIELD SAMPLING AND ANALYSIS

	FIELD INSTRUMENTATION	ANALYTICAL PARAMETER
☒ SOIL	NA	XRF METALS SCREENING
		LEAD, BARIUM, CADMIUM AND
☐ GROUNDWATER	NA	CHROMIUM DETECTED BY
		STATE SAMPLING
☐ SURFACE WATER	NA	
☒ AIR SAMPLING	HNU PID W/11.7eV, RADIATR - NSA CGE/O2	LEVEL OF PPE SELECTION
☐ STRUCTURES — ☐ TANKS		
☒ DRUMS	ELEVATED HNU PID AND CGE READINGS UP TO 200 units	VOC, BNA, OIL ID
☐ VATS		
☐ LAGOONS		
☒ OTHER	PIGMENT/DYE DRUMS - NO HNU READINGS	XRF METALS SCREENING
☐ SPILLAGE		
☐ RUNOFF		
☒ PILES	NA - BACKGROUND READINGS ONLY OR HNU	XRF METALS SCREENING
☐ SEDIMENTS		

EPA REGION I
REMOVAL SITE INVESTIGATION

ANALYTICAL RESULTS

SEE ATTACHED REPORT(S)

FIELD QUALITY CONTROL PROCEDURES

☐ SOP FOLLOWED ☐ DEVIATION FROM SOP:

COMMENTS: 3-40ml TRIP BLANKS FOR VOC ANALYSIS, EPA CHAIN OF CUSTODY PROCEDURES, FIELD LOG NOTES, FIELD INSTRUMENT CALIBRATIONS, SAMPLES PRESERVED WITH ICE TO 4°C.

FURTHER ANALYSIS

ANALYTICAL PARAMETER	MEDIA	LABORATORY
☒ VOA	☐ AIR	☒ NERL
☐ PCB	☐ WATER	☐ CLP LAB ☐ SAS ☐ SOW
☐ PESTICIDE	☒ SOIL	☐ NON-CLP LAB
☒ METALS CORE SCREEN	☐ SOURCE	
☐ CYANIDE	☐ SEDIMENT	
☒ SEMI VOA	☒ DRUM	
☐ TOXICITY		
☐ DIOXIN		
☐ ASBESTOS		
☒ OTHER OIL ID.		

ADDITIONAL PROCEDURES FOR SITE DETERMINATION

☐ BIOLOGICAL EVALUATION

☐ ATSDR

SITE DETERMINATION

LIST - USE NCP CRITERIA, CLOSURE MEMO 40 CFR 300.415 - REMOVAL ACTION SUBSECTION (B) PART (2) PARAGRAPHS: (i) - ACTUAL OR POTENTIAL EXPOSURE TO NEARBY HUMAN POPULATIONS, ANIMALS OR THE FOOD CHAIN FROM HAZARDOUS SUBSTANCES, POLLUTANTS OR CONTAMINANTS, (iii) - HAZARDOUS SUBSTANCES... IN DRUMS, TANKS ... THAT MAY POSE A THREAT OF RELEASE, (iv) HIGH LEVELS OF HAZARDOUS SUBSTANCES... IN SOILS LARGELY AT OR NEAR THE SURFACE, THAT MAY MIGRATE, (v) - THREAT OF FIRE OR EXPLOSION, (vii) - AVAILABILITY OF OTHER APPROPRIATE FEDERAL OR STATE RESPONSE MECHANISMS TO RESPOND TO THE RELEASE. SITE DETERMINATION WILL BE BASED ON PENDING ANALYTICAL DATA.

APPENDIX A

TOPOGRAPHIC LOCATION MAP

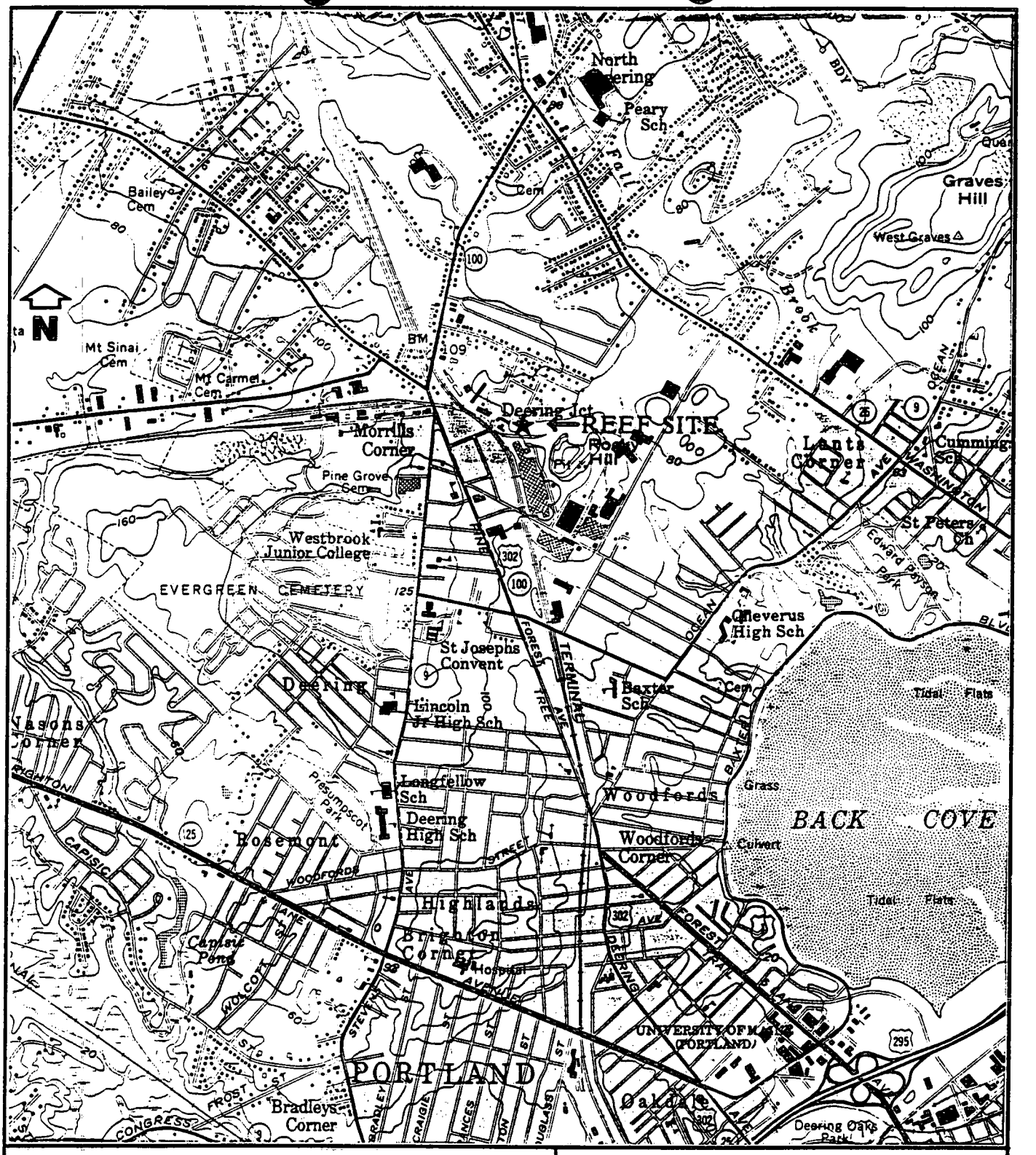

FIGURE 1
TOPOGRAPHIC LOCATION MAP
REEF (BURT COMPANY) SITE
PORTLAND, MAINE
NOT TO SCALE

USGS 7.5 min QUAD (Photo-enlarged)

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #/FILENAME
T.C.JONES	4/91	1235F1.DRW
APPROVED	DATE	TDD #
T.C.S.	4/91	01-9103-14

APPENDIX B

SITE DIAGRAM/SAMPLING LOCATIONS

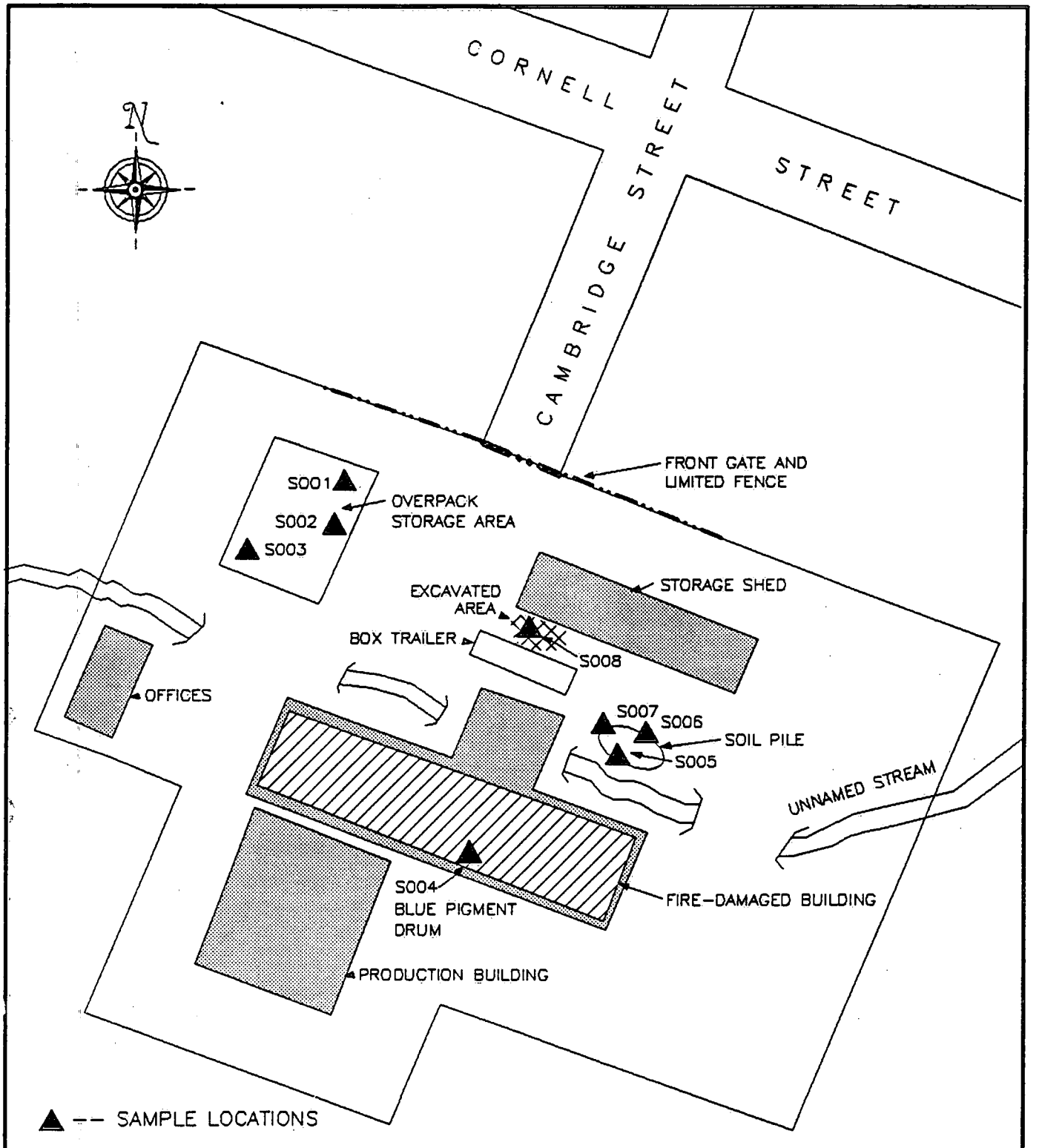

FIGURE 2
SITE DIAGRAM/SAMPLING LOCATIONS
REEF (BURT COMPANY) SITE
PORTLAND, MAINE
APRIL 5, 1991

NOT TO SCALE

WESTON MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #/FILENAME
T.C.JONES	4/91	1235F2.DRW
APPROVED	DATE	TDD #
T.C.S.	4/91	01-9103-14

APPENDIX C

SITE SAMPLING QA/QC PLAN

REEF (BURT COMPANY) SITE

SITE SAMPLING QA/QC PLAN

PORTLAND, MAINE

Prepared For:

U.S. Environmental Protection Agency
Region I
60 Westview Street
Lexington, MA 02173

CONTRACT NO. 68-W0-0036

TAT-01-N-00784

TDD NO. 01-9103-14

Prepared By:

ROY F. WESTON, INC.
Technical Assistance Team
Region I

April 1991

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1.0 BACKGROUND

The Reef (Burt Company) Site was referred to Mr. David McIntyre, EPA Response and Prevention Section (RPS) Chief, on March 25, 1991, by Ms. Denisse Messier, representing the Maine Department of Environmental Protection (ME DEP). ME DEP was requesting assistance with the disposal of 180 overpack drums that were the result of the removal actions previously conducted by ME DEP at the site.

The Reef (Burt Company) Site, located at 1 Cambridge Street in Portland, Cumberland County, Maine was brought to the attention of ME DEP on March 5, 1990, when drums of chemicals were discovered following a fire at the site in early March 1990. A site visit was made by the ME DEP Bureau of Oil and Hazardous Material Control (BOHMC) Response Services on March 22, 1990 and a preliminary site assessment was conducted by the ME DEP Division of Site Investigation and Remediation on September 20, 1990 (1).

The Reef (Burt Company) site is denoted as Lot No. 13A of tax map 151A for Portland (Figure 1 - Topographic Location Map). The site is approximately three acres and is located in a mixed use industrial and residential area, and is bordered by four industrial properties and one residential property. Site access is partially restricted by a fence, but there is no gate on the main entrance. There are three buildings on the site including a storage garage, an office building and a production building. The production building was damaged by fire and according to the ME DEP assessment, the building appears to be structurally unsound. Milliken Brook flows along the southern perimeter of the site and a small tributary stream flows through the property. (Figure 2 - Site Diagram).

The ME DEP BOHMC conducted removal operations from May 23, 1990, through June 7, 1990 where 180 drums of contaminated materials were overpacked and an additional 20 cubic yards of soils contaminated with dyes and lead monosilicate was stockpiled on the site. Additional removal operations are planned for the basement of the burned out building.

2.0 OBJECTIVES

The objective of the sampling survey is to obtain sufficient analytical data from a representative number of samples which can be used to determine if further actions at the site by the U.S. EPA Emergency Planning and Response Branch are deemed necessary.

3.0 QUALITY ASSURANCE LEVELS

The quality assurance (QA) levels for the on-site screening activities will be QA1. These activities include the use of the following instrumentation/test equipment:

- Mine Safety Appliances (MSA) Model 260 combustible gas/oxygen meter (CGI/O_2).
- Victoreen Model 490 radiation survey meter (RAD MTR).
- HNu Systems, Inc. PI-101 photoionization detector (HNu PID).
- Foxboro OVA 128-GC organic vapor analyzer (OVA).

The QA level for the samples analyzed at the laboratory will be a modified QA2.

See Section 6.0 for details.

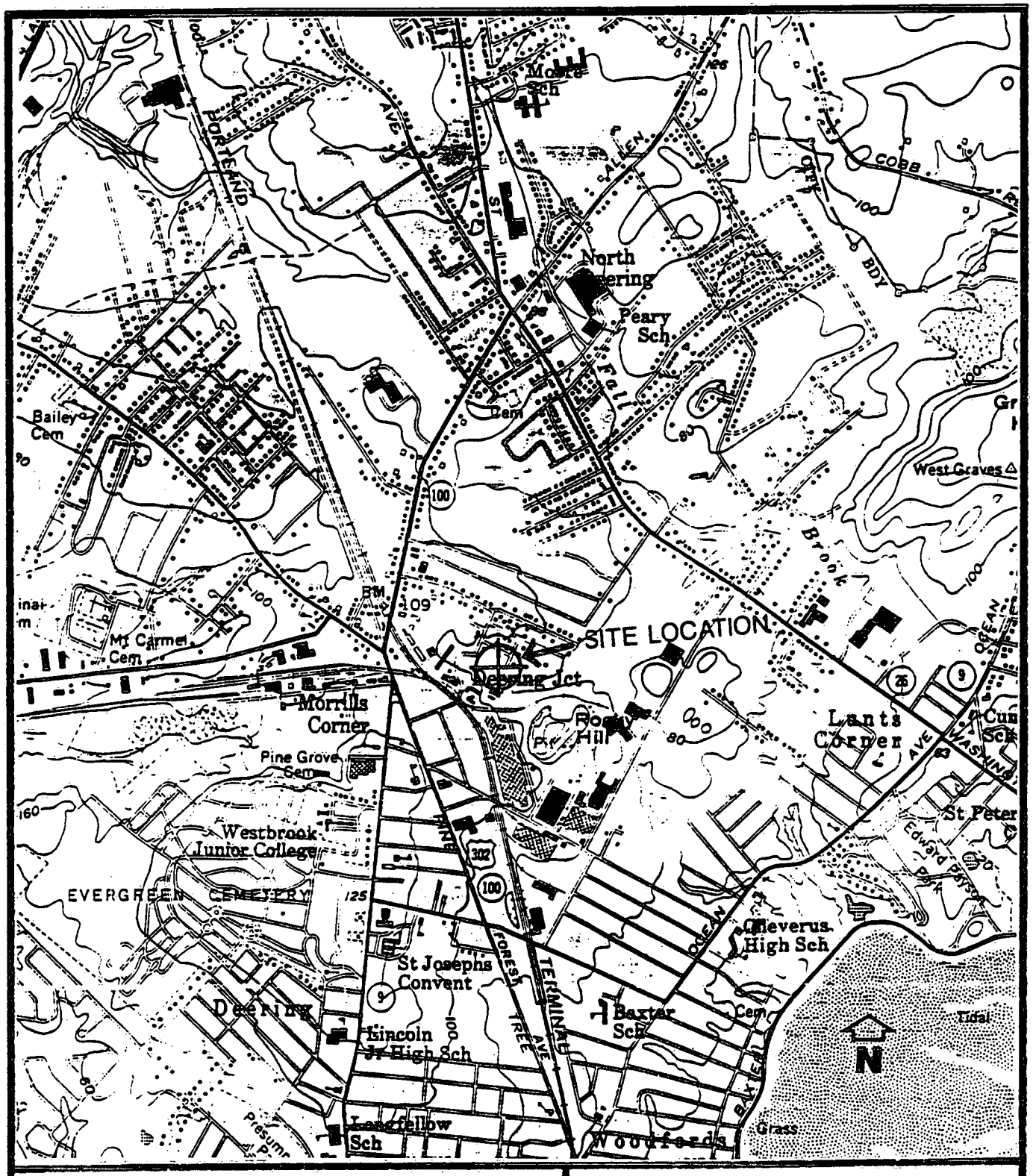


FIGURE 1
TOPOGRAPHIC LOCATION MAP
REEF (BURT COMPANY) SITE
PORTLAND, MAINE

USGS 7.5 min QUAD (Photo-enlarged)

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
T.C.JONES	4/91	1235F1.DRW
APPROVED	DATE	TDD #
T.C.S	4/91	01-9103-14

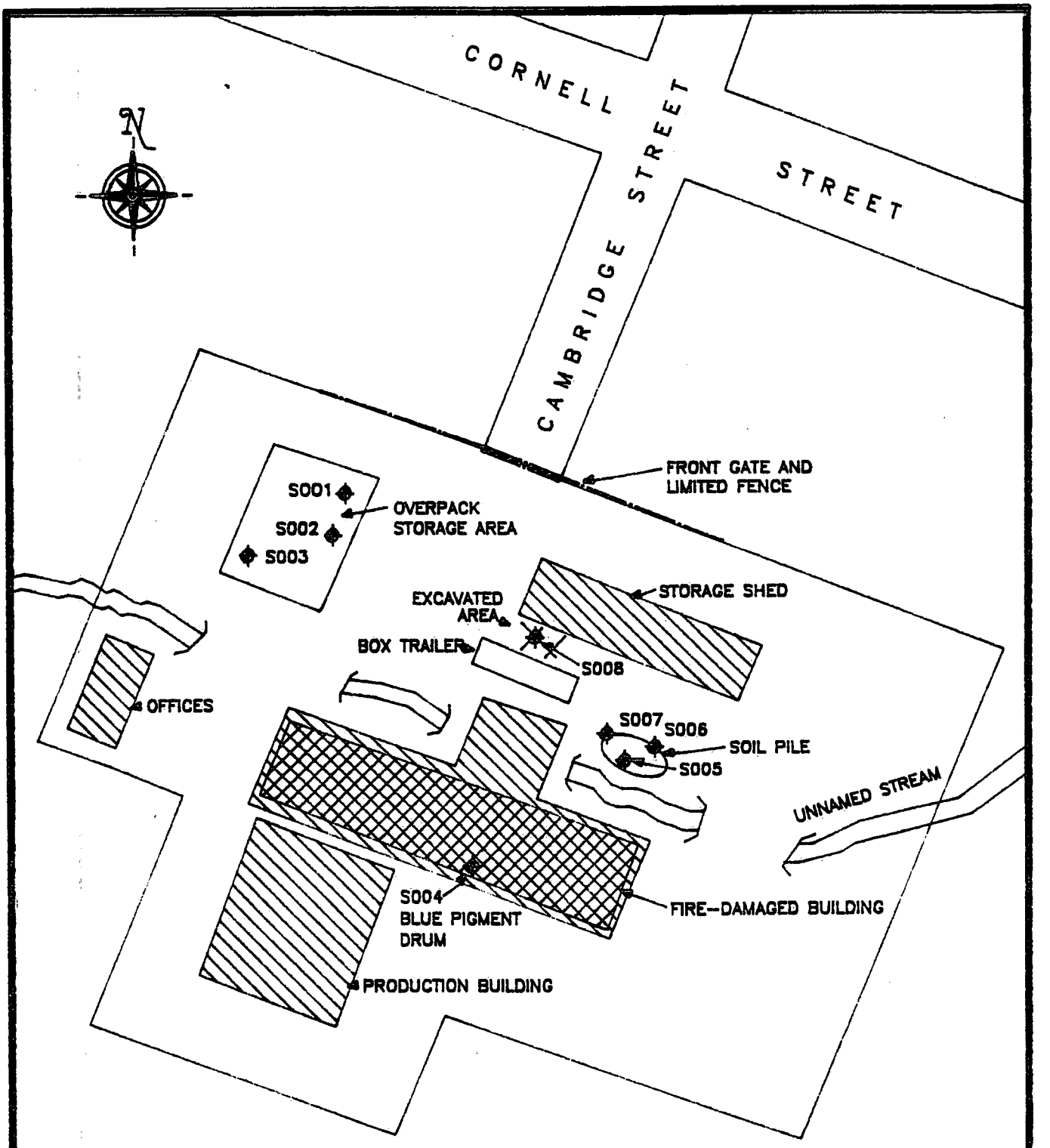


FIGURE 2
SITE DIAGRAM/SAMPLING LOCATIONS
REEF (BURT COMPANY) SITE
PORTLAND, MAINE
APRIL 5, 1991

NOT TO SCALE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN T.C.JONES	DATE 4/91	PCS # 1235F2.DRW
APPROVED T.C.S.	DATE 4/91	TDD # 01-9103-14

4.0 APPROACH AND SAMPLING METHODOLOGIES

The sampling survey will be conducted on or about April 5, 1991. Samples will be collected for, but are not limited to volatile organic compounds (VOCs), base/neutral and acid extractable compounds (BNA) and x-ray fluorescence (XRF) screening for metals.

Each media will be screened in the field prior to sample collection, if practical, to determine the location and quantity of samples. The samples will be containerized, preserved, and analyzed in accordance with Table 1. U.S. EPA chain of custody procedures will be utilized for all sampling activities. Samples will be disposed of by the laboratory performing the analyses. All contaminated sampling materials will be disposed of by the U.S. EPA New England Regional Laboratory.

4.1 Contaminated Soil in Drums

- Up to 10 samples will be collected from the contaminated soils contained in the overpacked drums located on site.
- The location of samples will be based on the ME DEP drum inventory and accessibility of individual drums.
- Samples will be collected with a metal trowel after the drums have been opened and screened with the field instruments.
- Decontamination of sampling equipment will include physical removal, methanol rinse, distilled water rinse and air drying.
- Samples will be analyzed at the U.S.EPA New England Regional Laboratory using the XRF metals screening procedures.

4.2 Liquid in Drums

- Up to five samples will be collected from the liquid materials located in the overpacked drums located on site.
- The location of samples will be based on the ME DEP drum inventory, accessibility of individual drums and results of the field instrunment screening.
- Samples will be collected with stainless steel spatulas or glass rods after the drums have been opened and screened with the field instruments.
- Decontamination of the stainless steel spatulas will include physical removal, methanol rinse, distilled water rinse and air drying. Individual glass rods will be disposed of inside of the overpack drums.
- Samples will be analyzed at the U.S. EPA New England Regional Laboratory for VOC screening analysis and BNA analysis.

4.3 Contaminated Soils

- Up to five samples will be collected from the soils that are visually observed to be contaminated and results of field screening show that VOCs are present.
- The location of samples will be based on visual observations (discoloration, stressed vegetation, etc.) and results of the field instrument screening.
- Samples will be collected for VOCs and BNAs with stainless steel spatulas, and samples will be collected for XRF screening with plastic scoops.
- Decontamination of sampling equipment will include physical removal, methanol rinse, distilled water rinse and air drying.
- Samples will be analyzed at the U.S. EPA New England Regional Laboratory for VOC screening analysis, XRF metal screening, and BNA analysis.
- Field screening methods will be used to determine the levels of VOC contamination at the site. A total of five VOC/BNA samples will be submitted to the laboratory for confirmation analyses.

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

U.S. EPA Emergency Planning and Response Branch:

MaryEllen Stanton	Site Investigator

Roy F. Weston Technical Assistance Team Members:

Timothy Jones	Task Manager/Sampling
Thomas Saccoccio	Sampling/Air Monitoring

6.0 QUALITY ASSURANCE REQUIREMENTS

The on-site screening activities will employ the following QA level 1 requirments: sample documentation; instrument calibration/performance check; and the determination of a detection limit, if appropriate.

The analyses of samples at the laboratory will employ the folloing modified QA level 2 requirments: sample documentation; chain of custody; sample holding times; method blanks, rinsate blanks, trip blanks, preparation blanks; initial and continuing calibration data; definitive identification: confirm the identification of analytes via a second GC column or mass spectra on the samples submitted (for organics only); and provide gas chromatograms and/or mass spectra.

The on-site screening for the previously mentioned surveys are to have standard QA/QC protocols for checking the calibration of the instruments used. The HNu PID calibration will be checked with an HNu calibration standard.

7.0 DELIVERABLES

A report detailing on-site activities will be generated by the Roy F. Weston Technical Assistance Team.

8.0 DATA VALIDATION

A data quality review of the sample analyses will be conducted by the Roy F. Weston Technical Assistance Team and/or EPA New England Regional Laboratory personnel.

QA level 1 data will be evaluated for calibration and detection limits.

QA level 2 modified data will be evaluated by the following: results of 10% of the samples in the analytical data packages will be evaluated for all of the elements listed in Section 6, "QA Requirements"; and holding times, blank contamination, and detection capability will be reviewed for all samples.

9.0 REFERENCES

1. Preliminary Assessment - Burt Company, ME DEP BOHMC, Decmeber 11, 1990.

TABLE 1

SAMPLING SUMMARY, ANALYTICAL METHODS & QA/QC SAMPLES

MATRIX	#SAMPLES	ANALYTICAL PARAMETER	VOLUME	CONTAINER	PRESERVATIVE	METHOD	TRIP BLANKS
Soil in Drum	10	XRF Screen	8 oz	glass	ice	EPA NERL	
Soil	5	BNA	8 oz	glass	ice	EPA 8270	
Soil	5	VOC	40 ml	glass	ice	EPA 8240	
Drum	5	BNA	8 oz	glass	ice	EPA 8270	
Drum	5	VOC	40 ml	glass	ice	EPA 8240	3-40 ml

APPENDIX D

SITE HEALTH AND SAFETY PLAN

WESTON MAJOR PROGRAMS DIVISION
HEALTH AND SAFETY PLAN
EMERGENCY RESPONSE / SITE INVESTIGATION

TDD No. 01-9103-14 **Site Name:** REEF SITE (BURT COMPANY)
Site Address: Street No. 1 CAMBRIDGE STREET
City PORTLAND
County/State CUMBERLAND COUNTY, MAINE
Site Contact / Phone No.: NORMAN REEF - OWNER / 207 774-6171

Directions to Site:(Att.Map) ROUTE 95 NORTH TO MAINE TURNPIKE TO EXIT 8 RIGHT OFF RAMP ONTO RIVERSIDE ST. ACCROSS RR TRACKS AND RIGHT ONTO WARREN AVENUE TO RT 302. TURN RIGHT ONTO FOREST AVE (302) AND THEN LEFT ONTO ALLEN AVE (RT 100N) FIRST ~~LEFT~~ RIGHT ONTO WOOD LAWN AVE, RIGHT ON MORRILL ST, LEFT ON UNIVERSITY, RIGHT ON CAMBRIDGE ST. (LOOK FOR BURNED BUILDING AT 1 CAMBRIDGE STREET.)

Historical/Current Site Information: THE SITE WAS A FORMER BILLIARD BALL / POKER CHIP FACTORY WHICH WAS DESTROYED BY FIRE IN MARCH 1990. THE ME DEP HAS CONDUCTED A REMOVAL ACTION - 180 OVERPACK DRUMS ON SITE. THERE ARE ALSO REPORTS OF HAZARDOUS MATERIALS IN THE SOIL, BURNED BUILDING AND ALONG ADJACENT RIVER

Incident Type:
( ) Air Release - _____
( ) Spill - _____
( ) Fire - _____
(X) HW Site - FIRE DAMAGED BUILDING - STATE REMOVAL SITE

Location Class : ( ) Industrial ( ) Commercial (X) Urban/Residential ( ) Rural w/ INDUSTRY

USEPA Contact: M.E. STANTON **Date of Initial Site Activities:** 4/5/91
Original HASP: Yes X **Modification Number:** _____
Lead TAT: JONES **Site Health & Safety Coordinator:** JONES

Response Activities/Duration (fill in as applicable)

Emergency Response:	( ) Perimeter Recon.	_____
	( ) Site Entry	_____
	( ) Visual Documentation:	_____
	( ) Multi-media Sampling:	_____
	( ) Decontamination:	_____
Assessment:	(X) Perimeter Recon.	3/4/91 2 hrs
	(X) Site Entry	" 1 hrs
	(X) Visual Documentation:	" 1 hr
	(X) Multi-media Sampling:	" 2 hrs
	(X) Decontamination:	" 5 hrs

ONE DAY PROJECT

Physical Safety Hazards to Personnel

( ) Heat ( ) Cold ( ) Precipitation (X) Confined Space ( ) Terrain
(X) Walking/Working Surfaces ( ) Fire & Explosion ( ) Oxygen Deficiency
( ) Underground Utilities ( ) Overhead Utilities ( ) Heavy Equipment
(X) Unknowns in Drums, Tanks, Containers ( ) Ponds, Lagoons, Impoundments
(X) Rivers, Streams ( ) Pressurized Containers, Systems ( ) Noise
( ) Illumination ( ) Nonionizing Radiation ( ) Ionizing Radiation
(X) FIRE DAMAGED STRUCTURE

Biological Hazards to Personnel NA

( ) Infectious/Medical/Hospital Waste ( ) Non-domesticated Animals ( ) Insects
( ) Poisonous Plants/Vegetation ( ) Raw Sewage

Training Requirements

(X) 40 Hour General Site Worker Course with three days supervised experience.
( ) 24 Hour Course for limited, specific tasks with one day supervised experience.
( ) 24 Hour Course for Level D Site with one day supervised experience.
(X) 8 Hour Annual Refresher Health and Safety Training.
(X) 8 Hour Management/Supervisor Training in addition to basic training course.
( ) Site Specific Health and Safety Training.
( ) Pre-entry training for emergency response skilled support personnel.

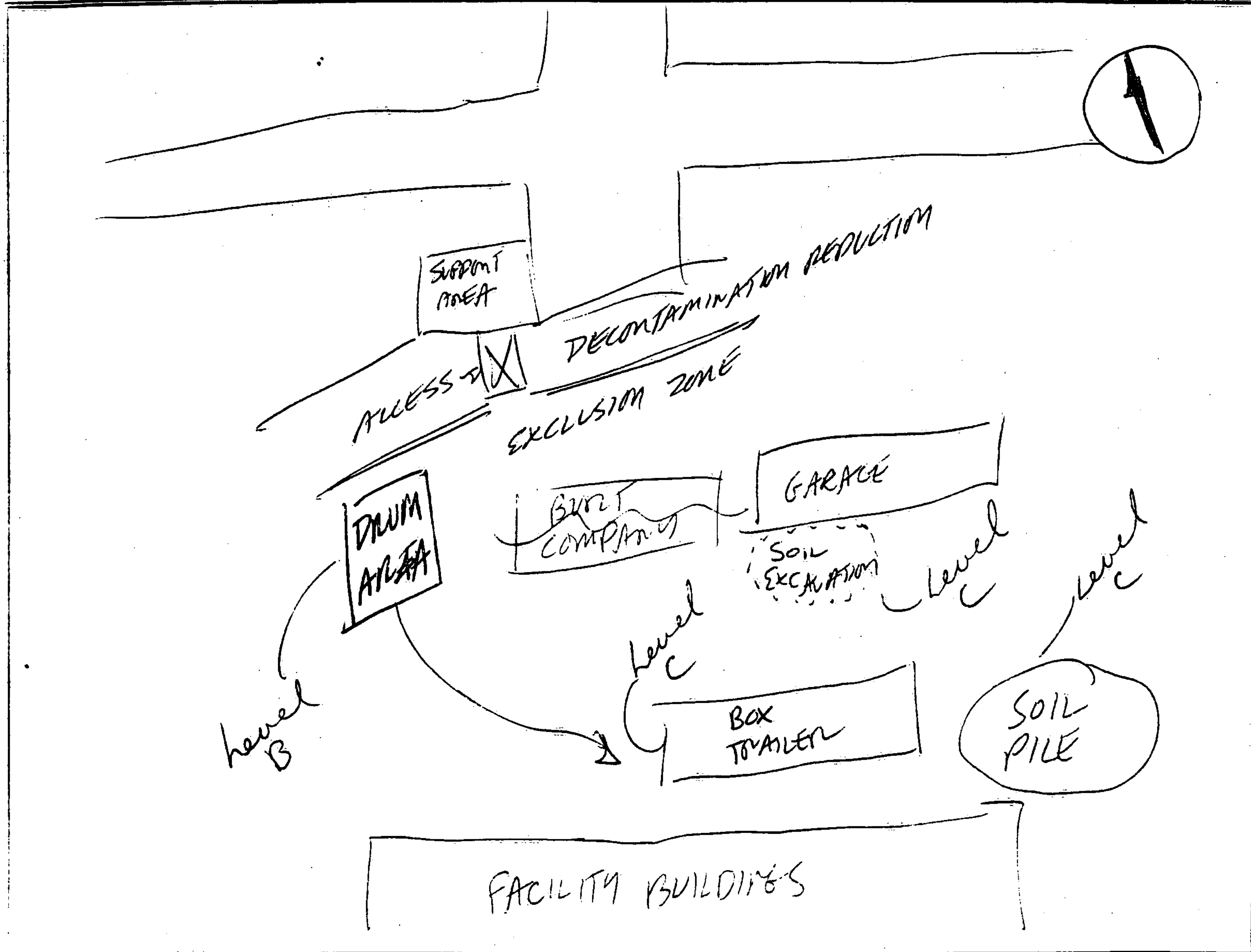
Medical Surveillance Requirements

(X) Baseline initial physical examination with physician certification.
(X) Annual medical examination with physician certification.
( ) Site Specific medical monitoring protocol (Radiation, Pesticide, PCB, Metals).
( ) Asbestos Worker medical protocol.
( ) Exempt from medical surveillance: _____.
(X) Examination required in event of chemical exposure or trauma.

Physical Parameters	Chemical Contaminant	Chemical Contaminant	Chemical Contaminant	Chemical Contaminant
	LEAD AS LEAD MONOSILICATE	BARIUM (BA)	UNKNOWN PAINTS, DYES, PIGMENTS	UNKNOWN SOILS AND LIQUIDS IN DRUMS
Exposure Limits IDLH Level	___ ppm 0.05 mg/m³ PEL ___ ppm 0.1 mg/m³ ~~TLV~~ TWA ___ ppm NA mg/m³ IDLH	___ ppm 0.5 mg/m³ PEL ___ ppm 0.5 mg/m³ TLV ___ ppm 250 mg/m³ IDLH	___ ppm ___ mg/m³ PEL ___ ppm ___ mg/m³ TLV ___ ppm ___ mg/m³ IDLH	___ ppm ___ mg/m³ PEL ___ ppm ___ mg/m³ TLV ___ ppm ___ mg/m³ IDLH
Physical Form Sol.Liq.Gas Color	X Solid ___ Liquid ___ Gas ___ Color WHITE/GRAY	X Solid ___ Liquid ___ Gas ___ Color	___ Solid ___ Liquid ___ Gas ___ Color	___ Solid ___ Liquid ___ Gas ___ Color
Odor	NA-DEPENDS ON SPECIFIC COMPOUND	DEPENDS ON SPECIFIC COMPOUND		
Flash Point Flammable Limits	NA ___ Degrees F or C ___% UEL ___% LEL	NA ___ Degrees F or C ___% UEL ___% LEL	___ Degrees F or C ___% UEL ___% LEL	___ Degrees F or C ___% UEL ___% LEL
Vapor Press. Vapor Dens.	NA ___ mm/Hg ___ Air = 1	NA ___ mm/Hg ___ Air = 1	___ mm/Hg ___ Air = 1	___ mm/Hg ___ Air = 1
Specific Gravity	NA ___ Water = 1	NA ___ Water = 1	___ Water = 1	___ Water = 1
Solubility	NA varies on compound	NA varies on compound		
Incompatible Materials	STRONG OXIDIZER HYDROGEN PEROXIDE SODIUM POTASSIUM	DEPENDS ON SPECIFIC COMPOUND		
Route of Exposure	X Inh ___ Abs X Con ___ Ing	X Inh ___ Abs X Con ___ Ing	___ Inh ___ Abs ___ Con ___ Ing	___ Inh ___ Abs ___ Con ___ Ing
Symptoms of Acute Exposure	LASSITUDE, INSOMNIA MALAISE, ABDOM. PAIN, HYPOTENSION ANEMIA, TREMORS	UPPER RESPIRATORY IRRITATION, MUSCLE SPASMS, SLOW PULSE IRRITATE EYES, SKIN BURNS		
First Aid Treatment	EYE-IRRIGATE SOAP WATER WASH SKIN, ART RESP MEDICAL ATTENTION	→ same skin-water flush → SAME → Same →	→ SAME	→ SAME
Ion Potential	NA ___ eV	NA ___ eV	___ eV	___ eV
Instruments For Detection	___ PID w/ ___ Probe ___ FID ___ CGI ___ RAD ___ Det Tube ___ Ph Other MINIRAM FOR TOTAL PARTICULATES	___ PID w/ ___ Probe ___ FID ___ CGI ___ RAD ___ Det Tube ___ Ph Other ___	___ PID w/ ___ Probe ___ FID ___ CGI ___ RAD ___ Det Tube ___ Ph Other ___	X PID w/ 11.7 Probe X FID X CGI X RAD ___ Det Tube ___ Ph Other PHOTOVAC

Site Control Measures

Site Map with work zones:



Decontamination Procedures

TCJ ~~(X)~~ Wet Decontamination - using: ________________

(X) Dry Decontamination

Description of Site Specific Decontamination Plan: REMOVE OUTER EXPENDABLE GEAR, DISPOSE OF IN PLASTIC TRASH BAGS, FIELD WASH OF HANDS AND FACE
wet (soap and water rinse) decon will be available if necessary

Adequacy of decontamination determined by: VISUAL OBSERVATION

ersonal Protective Equipment

TASK TO BE PERFORMED/AIR MONITORING REQUIRED	ANTICIPATED LEVEL OF PROTECTION	TYPE OF CHEMICAL PROTECTIVE COVERALL	INNER GLOVE OUTER GLOVE BOOT COVER	TYPE OF APR CARTRIDGE OR CANISTER
PERIMETER SURVEY	LEVEL D	COTTON WORK COVERALLS	NA	NA
SITE ENTRY 1, 2, 3 or 4	LEVEL B	SARANEX W HOOD AND BOOTS	VINYL NITRILE W/ SILVER SHIELD LATEX/VINYL	SCBA
DRUM SAMPLING 1, 2, 3 or 4	"	"	"	"
SOIL SAMPLING 1, 2, 3 or 4	LEVEL C	TYVEK W/ HOOD AND BOOTS	VINYL NITRILE LATEX/VINYL	GMC-H

Frequency and Types of Air Monitoring: (X) Continuous ( ) Routine - _____ ( ) Periodic - _____

DIRECT READING INSTRUMENTS	COMBUSTIBLE GAS/OXYGEN METER (1) TMX#3	RADIATION SURVEY METER/PROBE (2) TMX#3	PHOTOIONIZATION DETECTOR/PROBE (3) TMX#2	FLAME IONIZATION DETECTOR (4) NA	CHEM. DETECTOR TUBE (5) NA
ID NUMBER	EPA 941204	EPA 941236	EPA 313569	~~EPA~~ 165	
CAL. DATE	4/5/91	11/9/90	4/5/91		
TAT MEMBER	T. JONES T. Saucedo	FACTORY CALIBRATION	T. JONES T. Saucedo		
ACTION LEVEL	≥ 20% LEL ≤ 19.5%, ≥ 23% O_2 - LEAVE	3X BACKGRND - CAUTION; 1 MR/HR-LEAVE	UNKNOWNS 0-5 UNITS:"C" 5-500:"B"	UNKNOWNS 0-5 UNITS:"C" 5-500:"B"	PEL/TLV COMPARE W/PF

Emergency Phone Numbers

Emergency Contact	Location	Phone Number	Notified
Hospital	MAINE MEDICAL CENTER BRAMHALL ROAD	(207) 871-0111	YES - 4/02/91
Ambulance	PORTLAND ME	911 - IN PORTLAND (207) 874-8574	NO
Police	"	911 IN PORTLAND (207) 874-8574	NO
Fire Dept.	"	911 IN PORTLAND (207) 874-8574	NO

Chemical Trauma Capability? (X) Yes ( ) No If no, closest backup: _____ Phone: _____

Directions to Hospital (attach map) - Route verified by: TEST (TELEPHONE) Date: 4/2/91

FROM SITE RETURN TO ALLEN AVE (100) TURN LEFT AND BEAR LEFT ONTO FOREST AVE (yellow) INTO DOWNTOWN PORTLAND. TURN RIGHT ONTO CONGRESS STREET, THIRD TRAFFIC LIGHT TURN LEFT INTO BRAMHILL ROAD HOSPITAL IS ON TOP OF HILL.

Additional Emergency Phone Contacts

Contact	Phone Number
WESTON 24 hr. Hotline	215-524-1925 215-524-1926
WESTON Medical Emergency Service	513-421-3063
Chemtrec	800-424-9300
ATSDR	404-639-0615
ATF (explosives information)	800-424-9555
National Response Center	800-424-8802
National Poison Control Center	800-942-5969

HASP prepared by: _____ Date: 04/02/91

Pre-Response/Entry Approval by: _____ Date: 4/3/91

Verbal Approval/Modification to Original HASP by: _____ Date: __/__/__

Physical Description of Site and Response Activities

Size of Site: 3-4 acres Terrain level Weather Clear 80°F
Distance to Nearest: Residence adjacent School 1 mile Hospital 2 mile
Public Building 1 mile Other _____
Evacuation: (X) Yes ( ) No By Whom: _____
Nearest Waterway: Small Brook Distance from Site: flows through site

Condition	Observed	Potential	None	Comments/Observations
Surface Water Contamination		X		
Ground Water Contamination			X	
Drinking Water Contamination			X	
Air Release		X		
Soil Contamination	X			CONTAMINATED SOIL STOCKPILED
Stressed Vegetation			X	
Dead Animal Species			X	

Actions Taken On-Site:
Perimeter Monitoring: (X) Yes ( ) No
Site Entry by TAT: (X) Yes ( ) No

Tasks Conducted	Level of Protection/Specific PPE Used
PERIMETER SURVEY WITH ME DEP RESPONDERS	LEVEL D — STEEL TOE BOOTS — VISUAL OBSERVATIONS ONLY
DRUM INVENTORY — ALL DRUMS W/ CLOSED TOP	LEVEL C — TYVEK — NITRILE LATEX — HNU W/ 11.7eV BACKGROUND LEVELS
SOIL SAMPLING IN AREAS EXCAVATED AND STOCKPILED BY ME DEP.	LEVEL C — AS ABOVE
DRUM SAMPLING OF LIQUIDS IN OVERPACKS	LEVEL B — SARANEX — VINYL — SILVER SHIELD — NITRILE, LATEX HNU — W/ 11.7eV and CGI/O2

Air Monitoring Summary Log

Date: 4/5/91

Data Collected by: James Lawrence / Mary Ellen Stanton EPA SE

Data to be summarized by a "Range of readings,i.e.,- Low to High" and/or "Average" by location.

Station/Location	CGI/O_2 Meter	Radiation Meter	PID/Probe	FID/OVA	Detector Tube
DRUM AREA	21% O2 0% LEL	NO LEVELS ABOVE 0.1 MR/hr BACKGROUND	11.7eV HNU 3.0 UNITS BACKGROUND	NA	NA
TRAILER W/ OVERPACKS	21% O2 0% LEL	0.1 MR/hr BACKGROUND	11.7eV HNU 3.0 UNITS BACKGROUND	NA	NA
SOIL SAMPLING EXCAVATION / SOIL PILE	21% O2 0% LEL	0.1 MR/hr BACKGROUND	11.7eV HNU 3.0 UNITS BACKGROUND	NA	NA
DRUM SAMPLING DRUM #2	21% O2 10% LEL	0.1 MR/hr BACKGROUND	200 UNITS w/ 11.7eV HNU	NA 3 INSIDE DRUM	NA BACKGROUND IN BREATHING ZONE
DRUM SAMPLING DRUM #2	21% O2 0% LEL	0.1 MR/hr TS BACKGROUND	50 TO 70 UNITS w/ 11.7eV HNU	3 INSIDE DRUM	
DRUM SAMPLING DRUM #1 #3 TS	21% O2 0% LEL	0.1 MR/hr BACKGROUND	3.0 UNITS BACKGROUND 11.7eV HNU	NA	NA
DRUM INVENTORY (CLOSED OVER PACKS)	21% O2 0% LEL	0.1 MR/hr BACKGROUND	3.0 UNITS BACKGROUND 11.7eV HNU	NA	NA

Summary/Comments: DRUM INVENTORY WAS PERIMETER COUNT AND # VERIFICATION
DRUM #42 - SOLVENT DRUM - LIQUID STRONG SMOKE TO EFFECT PERMANENT MARKER ON SAMPLE LABEL. CAUTION GIVEN TO LABS.

Hazardous Waste Site and Environmental Sampling Activities

Off Site: ( ) Yes (X) No
On Site: (X) Yes ( ) No

Describe types of samples and methods used to obtain samples: SOIL SAMPLES/DYE SAMPLES - LEVEL C, PLASTIC SPOONS USED FOR METALS XRF SCREENING
DRUM SAMPLES - LEVEL B, GLASS THIEFS USED FOR VOC, BNA/OIL ID, PLASTIC FOR METALS

Was Laboratory notified of Potential Hazard Level Of Samples? (X) Yes ( ) No
40 ml VOA SAMPLES OVERPACKED IN 8oz JARS

Note: The nature of the work assignment may require the use of the following procedures/programs which will be included as Attachments to this HASP as applicable: Emergency Response Plan, Confined Space Entry Procedures. Spill Containment Program.

Disclaimer: This Health and Safety Plan (HASP) was prepared for work to be conducted under the Technical Assistance Team (TAT) Contract 68-WO-0036 for Zone I. Use of this HASP by WESTON and its subcontractors is intended to fulfill the OSHA requirements found in 29 CFR 1910.120. Items not specifically covered in this HASP are included by reference to 29 CFR 1910 and 1926.

The signatures below indicate that the individuals have read and understood this Health and Safety Plan.

PRINTED NAME	SIGNATURE	AFFILIATION	DATE
TIMOTHY JONES	Timothy Jones	Weston TAT	4/5/91
THOMAS C. SACCOCCIO	Thomas C. Saccoccio	TAT	4/5/91

Final Submission of HASP by:	Timothy Jones	Date 4/8/91
Post Response Review by:		
Post Response Approval by:	Robert Wenzel	4/22/91
TAT HSO Review by:		

COMMENTS/FOLLOWUP

USE EXIT 8

DIRECTIONS TO SITE
AND HOSPITAL MAP

REEF (BURT COMPANY) SITE ·
PORTLAND, MAINE

NOT TO SCALE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN TCJ	DATE 4/91	PCS # 1235
APPROVED T.C.S	DATE 4/91	TDD # 01-9103-14

APPENDIX E

CHAIN OF CUSTODY DOCUMENTS

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 1
JFK Federal Building, Rm. 2203
Boston, Massachusetts 02203

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
1235	REEF SITE, PORTLAND, ME

SAMPLERS: (Signature) [signature] Mary Ellen [signature] [signature]

REMARKS: All Samples Rec'd Cold with seals intact. Metals - R-7, BNA - R-3, VOA - R-6

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA (MID-LEVEL)	BNA (MID-LEVEL)	METALS (XRF SCREEN)	BNA/OIL ID (SEE PADS)			REMARKS
S000	4/4/91	0730		X	VOA TRIP BLANKS	3	X						#54110
S001	4/5/91	1330		X	DRUM #42	1	X						#55755 (SOLVENT IN HIGH %)
S002	4/5/91	1335		X	DRUM #32	2	X	X	or	X			#55756
S003	4/5/91	1345		X	DRUM #132	1			X				#55757
S004	4/5/91	1240		X	PIGMENT DRUM (BLUE)	1			X				#55758 - Product Stains caution.
S005	4/5/91	1250		X	SOIL PILE (#1)	1			X				#55759
S006	4/5/91	1255		X	SOIL PILE (#2)	1			X				#55760
S007	4/5/91	1300		X	SOIL PILE (#3)	1			X				#62516
S008	4/5/91	1305	X		BASE OF EXCAVATION	1			X				#62903

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	4/8/91 0845				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		Kathy Jarek	4/8/91 8:45	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1-4717

U.S. ENVIRONMENT PROTECTION AGENCY REGION I

SOURCE Reef Site PERMIT NO 1235

CITY Portland, ME COLLECTOR T. Jones

WEATHER: (CLEAR) RAIN, SNOW (CIRCLE ONE)

AIR TEMP (°C): < 0°, 0°-10°, 11°-20°, > 21°

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED
(Circle One) Other _____

PARAMETERS (CHECK APPROPRIATE)

Bacti		NH_3		Phenol	
BOD		NO_{2+3}		COD	
TSS		TKN		PCB	
Turb		T P		X-Ray	
Organics		O&G		Other	
VOA's	X	CN			

FLOW MEASUREMENT

None
Magmeter
Venturi
Parshall
V-Notch
(C) Rectangular
Other _____

SIZE

Inches/Degrees

METALS

	Tot.	Diss.
Cd		
Cu		
Cr (T)		
*Cr (+6)		
Fe		
Hg		
Mn		
Ni		
Pb		
Sn		
Zn		
Other		

*Unpreserved sample

EPA RI-7500-31

LAB CODE Nº 54110

PROJECT # 1235

STATION # 5000

SAMPLE TYPE: (GRAB) ___T ___V

COLLECTION DATE

START	END
Y Y M M D D	Y Y M M D D
9 1 0 4 0 4	

COLLECTION TIME

START	END
0730	

SAMPLE TEMP (°C)

pH (SU)

TOT Cl_2 (mg/l)

SETTLEABLE SOLIDS (ml/l)

FLOW METER TOTALIZER	EPA	SOURCE
START		
END		
MULTIPLIER		

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION I

SOURCE Reef Site PERMIT NO 1235

CITY Portland, ME COLLECTOR T. Jones

WEATHER: (CLEAR) RAIN, SNOW (CIRCLE ONE)

AIR TEMP (°C): ~~< 0°, 0°-10°, 11°-20°, > 21°~~ 70°F

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED
(Circle One) Other _____

PARAMETERS (CHECK APPROPRIATE)

Bacti		NH_3		Phenol	
BOD		NO_{2+3}		COD	
TSS		TKN		PCB	
Turb		T P		X-Ray	
Organics		O&G		Other	
VOA's	X	CN			

FLOW MEASUREMENT

None
Magmeter
Venturi
Parshall
V-Notch
(C) Rectangular
Other _____

SIZE

Inches/Degrees

METALS

	Tot.	Diss.
Cd		
Cu		
Cr (T)		
*Cr (+6)		
Fe		
Hg		
Mn		
Ni		
Pb		
Sn		
Zn		
Other		

*Unpreserved sample

EPA RI-7500-31

LAB CODE Nº 55755

PROJECT # 1235

STATION # 5001

SAMPLE TYPE: (GRAB) ___T ___V

COLLECTION DATE

START	END
Y Y M M D D	Y Y M M D D
9 1 0 4 0 5	9 1 0 4 0 5

COLLECTION TIME

START	END
1330	1330

SAMPLE TEMP (°C)

pH (SU)

TOT Cl_2 (mg/l)

SETTLEABLE SOLIDS (ml/l)

FLOW METER TOTALIZER	EPA	SOURCE
START		
END		
MULTIPLIER		

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION I

SOURCE Reef Site PERMIT NO 1235

CITY Portland, ME COLLECTOR T. Jones

WEATHER: (CLEAR) RAIN, SNOW (CIRCLE ONE)

AIR TEMP ~~(°C): < 0°, 0°-10°, 11°-20°, > 21°~~ 70 °F

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED (Circle One) Other _____

LAB CODE № 55756

PROJECT # 1235

STATION # 5002

SAMPLE TYPE: (GRAB), ___T___V___

COLLECTION DATE

Y Y M M D D	Y Y M M D D
9 1 0 4 0 5	9 1 0 4 0 5
START	END

COLLECTION TIME

1335	1335
START	END

PARAMETERS (CHECK APPROPRIATE)

Bacti	☐	NH_3	☐	Phenol	☐
BOD	☐	NO_2+3	☐	COD	☐
TSS	☐	TKN	☐	PCB	☐
Turb	☐	T P	☐	X-Ray	☐
Organics	☐	O&G	☐	Other BNA	
VOA's	☒	CN	☐		

METALS

	Tot.	Diss.
Cd		
Cu		
Cr (T)		
*Cr (+6)		
Fe		
Hg		
Mn		
Ni		
Pb		
Sn		
Zn		
Other		

*Unpreserved sample

FLOW MEASUREMENT

None ☐
Magmeter ☐
Venturi ☐
Parshall ☐
V-Notch ☐
Rectangular ☐
Other _____

SIZE ☐☐ Inches/Degrees

SAMPLE TEMP (°C) ☐☐

pH (SU) ☐☐.☐

TOT Cl_2 (mg/l) ☐☐☐

SETTLEABLE SOLIDS (ml/l) ☐☐☐☐

FLOW METER TOTALIZER	EPA	SOURCE
START		
END		
MULTIPLIER		

EPA RI-7500-31

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION I

SOURCE Reef Site PERMIT NO 1235

CITY Portland, ME COLLECTOR T. Jones

WEATHER: CLEAR, RAIN, SNOW (CIRCLE ONE)

AIR TEMP (°C): < 0°, 0°-10°, 11°-20°, > 21°

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED (Circle One) Other _____

LAB CODE № 55757

PROJECT # 1235

STATION # 5003

SAMPLE TYPE: GRAB, ___T___V___

COLLECTION DATE

Y Y M M D D	Y Y M M D D
9 1 0 4 0 5	
START	END

COLLECTION TIME

1345	
START	END

PARAMETERS (CHECK APPROPRIATE)

Bacti	☐	NH_3	☐	Phenol	☐
BOD	☐	NO_2+3	☐	COD	☐
TSS	☐	TKN	☐	PCB	☐
Turb	☐	T P	☐	X-Ray	☐
Organics	☐	O&G	☐	Other _____	
VOA's	☐	CN	☐		

METALS

	Tot.	Diss.
Cd		
Cu		
Cr (T)		
*Cr (+6)		
Fe		
Hg		
Mn		
Ni		
Pb		
Sn		
Zn		
Other Metals Screen		

*Unpreserved sample

FLOW MEASUREMENT

None ☐
Magmeter ☐
Venturi ☐
Parshall ☐
V-Notch ☐
Rectangular ☐
Other _____

SIZE ☐☐ Inches/Degrees

SAMPLE TEMP (°C) ☐☐

pH (SU) ☐☐.☐

TOT Cl_2 (mg/l) ☐☐☐

SETTLEABLE SOLIDS (ml/l) ☐☐☐☐

FLOW METER TOTALIZER	EPA	SOURCE
START		
END		
MULTIPLIER		

EPA RI-7500-31

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION I

LAB CODE № 55758

SOURCE REEF SITE PERMIT NO 1235

CITY PORTLAND, ME COLLECTOR T. JONES

PROJECT # 1235

STATION # 5004

SAMPLE TYPE: GRAB,____T____V____

WEATHER: CLEAR, RAIN, SNOW (CIRCLE ONE)

AIR TEMP (°C): < 0°, 0°-10°, 11°-20°, > 21°

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED (Circle One) Other ________

COLLECTION DATE

Y Y M M D D	Y Y M M D D
910405	
START	END

COLLECTION TIME

START	END
1240	

PARAMETERS (CHECK APPROPRIATE)

Bacti	☐	NH3	☐	Phenol	☐
BOD	☐	NO2+3	☐	COD	☐
TSS	☐	TKN	☐	PCB	☐
Turb	☐	T P	☐	X-Ray	☐
Organics	☐	O&G	☐	Other ________	
VOA's	☐	CN	☐	________	

METALS

Tot.	Diss.
Cd	☐
Cu	☐
Cr (T)	☐
*Cr (+6)	☐
Fe	☐
Hg	☐
Mn	☐
Ni	☐
Pb	☐
Sn	☐
Zn	☐
Other Metals Screen	

*Unpreserved sample

FLOW MEASUREMENT

- None ☐
- Magmeter ☐
- Venturi ☐
- Parshall ☐
- V-Notch ☐
- Rectangular ☐
- Other ________

SIZE ☐☐ Inches/Degrees

SAMPLE TEMP (°C) ☐☐

pH (SU) ☐☐.☐

TOT Cl_2 (mg/l) ☐☐☐

SETTLEABLE SOLIDS (ml/l) ☐☐☐☐

FLOW METER TOTALIZER	EPA	SOURCE
START		
END		
MULTIPLIER		

EPA RI-7500-31

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION I

LAB CODE № 55759

SOURCE REEF SITE PERMIT NO 1235

CITY PORTLAND, ME COLLECTOR T. JONES

PROJECT # 1235

STATION # 5005

SAMPLE TYPE: GRAB,____T____V____

WEATHER: CLEAR, RAIN, SNOW (CIRCLE ONE)

AIR TEMP (°C): < 0°, 0°-10°, 11°-20°, > 21°

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED (Circle One) Other ________

COLLECTION DATE

Y Y M M D D	Y Y M M D D
910405	
START	END

COLLECTION TIME

START	END
1250	

PARAMETERS (CHECK APPROPRIATE)

Bacti	☐	NH3	☐	Phenol	☐
BOD	☐	NO2+3	☐	COD	☐
TSS	☐	TKN	☐	PCB	☐
Turb	☐	T P	☐	X-Ray	☐
Organics	☐	O&G	☐	Other ________	
VOA's	☐	CN	☐	________	

METALS

Tot.	Diss.
Cd	☐
Cu	☐
Cr (T)	☐
*Cr (+6)	☐
Fe	☐
Hg	☐
Mn	☐
Ni	☐
Pb	☐
Sn	☐
Zn	☐
Other Metals Screen	

*Unpreserved sample

FLOW MEASUREMENT

- None ☐
- Magmeter ☐
- Venturi ☐
- Parshall ☐
- V-Notch ☐
- Rectangular ☐
- Other ________

SIZE ☐☐ Inches/Degrees

SAMPLE TEMP (°C) ☐☐

pH (SU) ☐☐.☐

TOT Cl_2 (mg/l) ☐☐☐

SETTLEABLE SOLIDS (ml/l) ☐☐☐☐

FLOW METER TOTALIZER	EPA	SOURCE
START		
END		
MULTIPLIER		

EPA RI-7500-31

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION I

SOURCE Ref Site PERMIT NO 1235

CITY Portland, ME COLLECTOR T. Jones

WEATHER: CLEAR, RAIN, SNOW (CIRCLE ONE)

AIR TEMP (°C): < 0°, 0°-10°, 11°-20°, > 21°

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED (Circle One) Other _____

LAB CODE Nº 55760

PROJECT # 1235

STATION # 5006

SAMPLE TYPE: GRAB, ___T ___V ___

COLLECTION DATE

Y Y M M D D	Y Y M M D D
9/10405	
START	END

COLLECTION TIME

1515	
START	END

SAMPLE TEMP (°C) ____

pH (SU) ____

TOT Cl_2 (mg/l) ____

SETTLEABLE SOLIDS (ml/l) ____

FLOW METER EPA SOURCE TOTALIZER

START _____ _____

END _____ _____

MULTIPLIER _____ _____

PARAMETERS (CHECK APPROPRIATE)

Bacti		NH_3		Phenol	
BOD		NO_{2+3}		COD	
TSS		TKN		PCB	
Turb		T P		X-Ray	
Organics		O&G		Other _____	
VOA's		CN		_____	

METALS

	Tot.	Diss.
Cd		
Cu		
Cr (T)		
*Cr (+6)		
Fe		
Hg		
Mn		
Ni		
Pb		
Sn		
Zn		
Other		

FLOW MEASUREMENT

None
Magmeter
Venturi
Parshall
V-Notch
Rectangular
Other _____

SIZE ____ Inches/Degrees

Metals Screen

*Unpreserved sample

EPA RI-7500-31

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION I

SOURCE Ref Site PERMIT NO 1235

CITY Portland, ME COLLECTOR T. Jones

WEATHER: CLEAR, RAIN, SNOW (CIRCLE ONE)

AIR TEMP (°C): < 0°, 0°-10°, 11°-20°, > 21°

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED (Circle One) Other _____

LAB CODE Nº 62516

PROJECT # 1235

STATION # 5007

SAMPLE TYPE: GRAB, ___T ___V ___

COLLECTION DATE

Y Y M M D D	Y Y M M D D
9/10405	
START	END

COLLECTION TIME

1300	
START	END

SAMPLE TEMP (°C) ____

pH (SU) ____

TOT Cl_2 (mg/l) ____

SETTLEABLE SOLIDS (ml/l) ____

FLOW METER EPA SOURCE TOTALIZER

START _____ _____

END _____ _____

MULTIPLIER _____ _____

PARAMETERS (CHECK APPROPRIATE)

Bacti		NH_3		Phenol	
BOD		NO_{2+3}		COD	
TSS		TKN		PCB	
Turb		T P		X-Ray	
Organics		O&G		Other _____	
VOA's		CN		_____	

METALS

	Tot.	Diss.
Cd		
Cu		
Cr (T)		
*Cr (+6)		
Fe		
Hg		
Mn		
Ni		
Pb		
Sn		
Zn		
Other		

FLOW MEASUREMENT

None
Magmeter
Venturi
Parshall
V-Notch
Rectangular
Other _____

SIZE ____ Inches/Degrees

Metals Screen

*Unpreserved sample

EPA RI-7500-31

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION I

SOURCE Reef Site PERMIT NO 1255

CITY Portland, ME COLLECTOR T. Jones

WEATHER: CLEAR, RAIN, SNOW (CIRCLE ONE)

AIR TEMP (°C): < 0°, 0°-10°, 11°-20°, > 21°

SAMPLE LOCATION: SUPPLY WATER, WASTEWATER: RAW, TREATED
(Circle One) Other _____

LAB CODE Nº 62903

PROJECT # 1235

STATION # 5008

SAMPLE TYPE: GRAB, ___ T ___ V ___

COLLECTION DATE

Y Y M M D D	Y Y M M D D
9 1 0 4 0 5	
START	END

COLLECTION TIME

1 3 0 5	
START	END

PARAMETERS (CHECK APPROPRIATE)

Bacti	☐	NH_3	☐	Phenol	☐
BOD	☐	NO_{2+3}	☐	COD	☐
TSS	☐	TKN	☐	PCB	☐
Turb	☐	T P	☐	X-Ray	☐
Organics	☐	O&G	☐	Other _____	
VOA's	☐	CN	☐	_____	

METALS

	Tot.	Diss.
Cd	☐	☐
Cu	☐	☐
Cr (T)	☐	☐
*Cr (+6)	☐	☐
Fe	☐	☐
Hg	☐	☐
Mn	☐	☐
Ni	☐	☐
Pb	☐	☐
Sn	☐	☐
Zn	☐	☐
Other	☐	☐

FLOW MEASUREMENT

None	☐
Magmeter	☐
Venturi	☐
Parshall	☐
V-Notch	☐
Rectangular	☐
Other _____	☐

SIZE ☐☐

Inches/Degrees

*Unpreserved sample

SAMPLE TEMP (°C) ☐☐

pH (SU) ☐☐.☐

TOT Cl_2 (mg/l) ☐☐☐

SETTLEABLE SOLIDS (ml/l) ☐☐☐☐

FLOW METER TOTALIZER	EPA	SOURCE
START	_____	_____
END	_____	_____
MULTIPLIER	_____	_____

EPA RI-7500-31

APPENDIX F

PROPERTY DEED/TAX MAP

BK8279PG0185

020432

KNOW ALL MEN BY THESE PRESENTS, THAT

WE, John M. Kendall and Sherman B. Kendall, both of Falmouth, County of Cumberland and State of Maine, for consideration paid by Norman S. Reef and Raymond H. Reef, Trustees of R. F. Investment Trust, of Portland, County of Cumberland and State of Maine, the receipt whereof we do hereby acknowledge, do hereby remise, bargain, sell, convey and forever grant unto the said Norman S. Reef and Raymond H. Reef, Trustees of R. F. Investment Trust, their successors and assigns forever, with WARRANTY COVENANTS, the following described real property with buildings thereon situated in Portland, County of Cumberland and State of Maine, and more particularly bounded and described as follows:

MAINE REAL ESTATE TRANSFER TAX PAID

A certain lot or parcel of land in said Portland, Maine more particularly bounded and described on Exhibit A attached hereto.

Being the same premises set forth in the Warranty Deed from Arthur Girard to John M. Kendall and Sherman B. Kendall dated July 15, 1985 and recorded in the Cumberland County Registry of Deeds in Book 6826, Page 263.

IN WITNESS WHEREOF, WE, the said John M. Kendall and Sherman B. Kendall, being husband and wife, joining in this deed as Grantors, and releasing all rights by descent and all other rights in the above described premises, have hereunto set our hands and seals this 6th day of May, 1988.

IN THE PRESENCE OF:

John M. Kendall

Sherman B. Kendall

To have and to hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said John M. Kendall and Sherman B. Kendall as joint tenants, their heirs and assigns, to them and their use and behoof forever.

And I do covenant with the said Grantees their heirs and assigns, that I am lawfully seized in fee of the premises, that they are free of all encumbrances

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs shall and will warrant and defend the same to the said Grantees their heirs and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, I, the said Arthur Girard

have hereunto set my hand and seal this 15th day of the month of July, A.D. 1985.

Signed, Sealed and Delivered in presence of

[signature] .... [signature] Arthur Girard

State of Maine, County of CUMBERLAND ss. July 15, 1985.

Then personally appeared the above named Arthur Girard

and acknowledged the foregoing instrument to be his free act and deed.

Before me,

[signature]
Edwin A. Heisler
Attorney at Law

RECEIVED
1985 JUL 16 AM 10:49
RECORDED REGISTRY OF DEEDS
CUMBERLAND COUNTY

[signature] James J. Walsh

BK8279PG0186

STATE OF MAINE
CUMBERLAND, ss.

May 6, 1988

Personally appeared the above named John M. Kendall and Sherman B. Kendall and acknowledged the foregoing instrument to be their free act and deed.

Before me,

Notary Public
Attorney at Law
Allen J. Hayes

Exhibit A

A certain lot or parcel of land, together with all buildings and improvements now or hereafter located thereon, situated southeasterly of, but not adjoining Morrill Street, in the City of Portland, County of Cumberland and State of Maine and more particularly bounded and described as follows:

Commencing at an iron rod located at the southerly end of Cambridge Street on the easterly side thereof; thence on a course of south 50°-46'-5" east a distance of 291.53 feet to an iron rod; thence on the same course a distance of 17.7 feet to an iron rod set at the northeasterly corner of the premises herein conveyed; thence on a course of south 52°-5'-50" west a distance of 330.96 feet to an iron pipe; thence on a course of north 47°-25'-55" west a distance of 192.77 feet to an iron rod; thence on a course of south 46°-34'-35" west a distance of 49.43 feet to an iron rod; thence on a course of north 47°-5'-25" west a distance of 150.10 feet to an iron rod; thence on a course of north 46°-33'-0" east a distance of 100.10 feet to an iron rod; thence on a course of north 47°-7'-0" west a distance of 40.60 feet to an iron rod; thence on a course of north 39°-18'-0" east along land now or formerly of Merrill Industries, Inc., a distance of 314.52 feet to an iron pipe; thence on a course of south 50°-46'-5" east a distance of 110.48 feet to an iron rod set in the westerly sideline of said Cambridge Street; thence continuing on the same course along the southerly end of Cambridge Street a distance of 40 feet to the point of beginning. Containing 3.09 acres, more or less.

The above described premises are shown on a plan of land for Merrill Industries prepared by Owen Haskell, Inc., and dated February 15, 1985, and shown on said plan as land "NOW OR FORMERLY THE BURT COMPANY".

Also all right, title and interest of the Grantor herein in and to a certain right of way extending easterly along the location of the Portland Terminal Company to Morrill Street from a certain right of way leading from land of said Grantor to land of said Portland Terminal Company. Meaning and intending hereby to convey all right, title and interest of the Grantor in and to said right of way as now used by said Grantor. Being the same conveyed to Portland Billiard Ball Corporation by Portland Billiard Ball Company by deed dated December 29, 1930 and recorded in said Registry of Deeds Book 1365, Page 68.

Also a right of way over the following described strip of land located at North Deering near Morrills Corner, said strip being bounded as follows: Beginning on the easterly line of the railroad location used and occupied by the Maine Central and Portland and Rochester Railroad at a stone wall marking the dividing line of land formerly of Charles Goodridge and land formerly belonging to Rufus Morrill, thence northeasterly by said wall two hundred sixty-nine (269) feet to the corner of the same; thence southeasterly by said wall forty (40) feet; thence southwesterly parallel with the first course to the easterly line of said railroad location; thence by said railroad location to the point of beginning. Being the same right of way described in deed from Charles Goodridge to Charles E. Morrill, recorded in Cumberland County Registry of Deeds, Book 565, Page 13, and the same conveyed to Portland Billiard Ball Corporation by Colonial Containers Corporation by deed dated March 18, 1931 and recorded in said Registry of Deeds, Book 1365, Page 307.

27580 BOOK 6826 PAGE 263

WARRANTY DEED

Know all Men by these Presents,

That I, Arthur Girard, of Portland, County of Cumberland and State of Maine,

in consideration of One Dollar ($1.00) and other valuable consideration,

paid by John M. Kendall and Sharman B. Kendall, both of Falmouth, County of Cumberland and State of Maine,

whose mailing address is 28 Hammond Road, Falmouth, Maine, 04105

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said John M. Kendall and Sherman B. Kendall, as joint tenants and not as tenants in common,

their heirs and assigns forever.

A certain lot or parcel of land in said Portland, Maine more particularly bounded and described on Exhibit A attached hereto:

Exhibit A

A certain lot or parcel of land, together with all buildings and improvements now or hereafter located thereon, situated southeasterly of, but not adjoining Morrill Street, in the City of Portland, County of Cumberland and State of Maine and more particularly bounded and described as follows:

Commencing at an iron rod located at the southerly end of Cambridge Street on the easterly side thereof; thence on a course of south 50°-46'-5" east a distance of 291.53 feet to an iron rod; thence on the same course a distance of 17.7 feet to an iron rod set at the northeasterly corner of the premises herein conveyed; thence on a course of south 52°-5'-50" west a distance of 330.96 feet to an iron pipe; thence on a course of north 47°-25'-55" west a distance of 192.77 feet to an iron rod; thence on a course of south 46°-34'-35" west a distance of 49.43 feet to an iron rod; thence on a course of north 47°-5'-25" west a distance of 150.10 feet to an iron rod; thence on a course of north 46°-33'-0" east a distance of 100.10 feet to an iron rod; thence on a course of north 47°-7'-0" west a distance of 40.60 feet to an iron rod; thence on a course of north 39°-18'-0" east along land now or formerly of Merrill Industries, Inc., a distance of 314.52 feet to an iron pipe; thence on a course of south 50°-46'-5" east a distance of 110.48 feet to an iron rod set in the westerly sideline of said Cambridge Street; thence continuing on the same course along the southerly end of Cambridge Street a distance of 40 feet to the point of beginning. Containing 3.09 acres, more or less.

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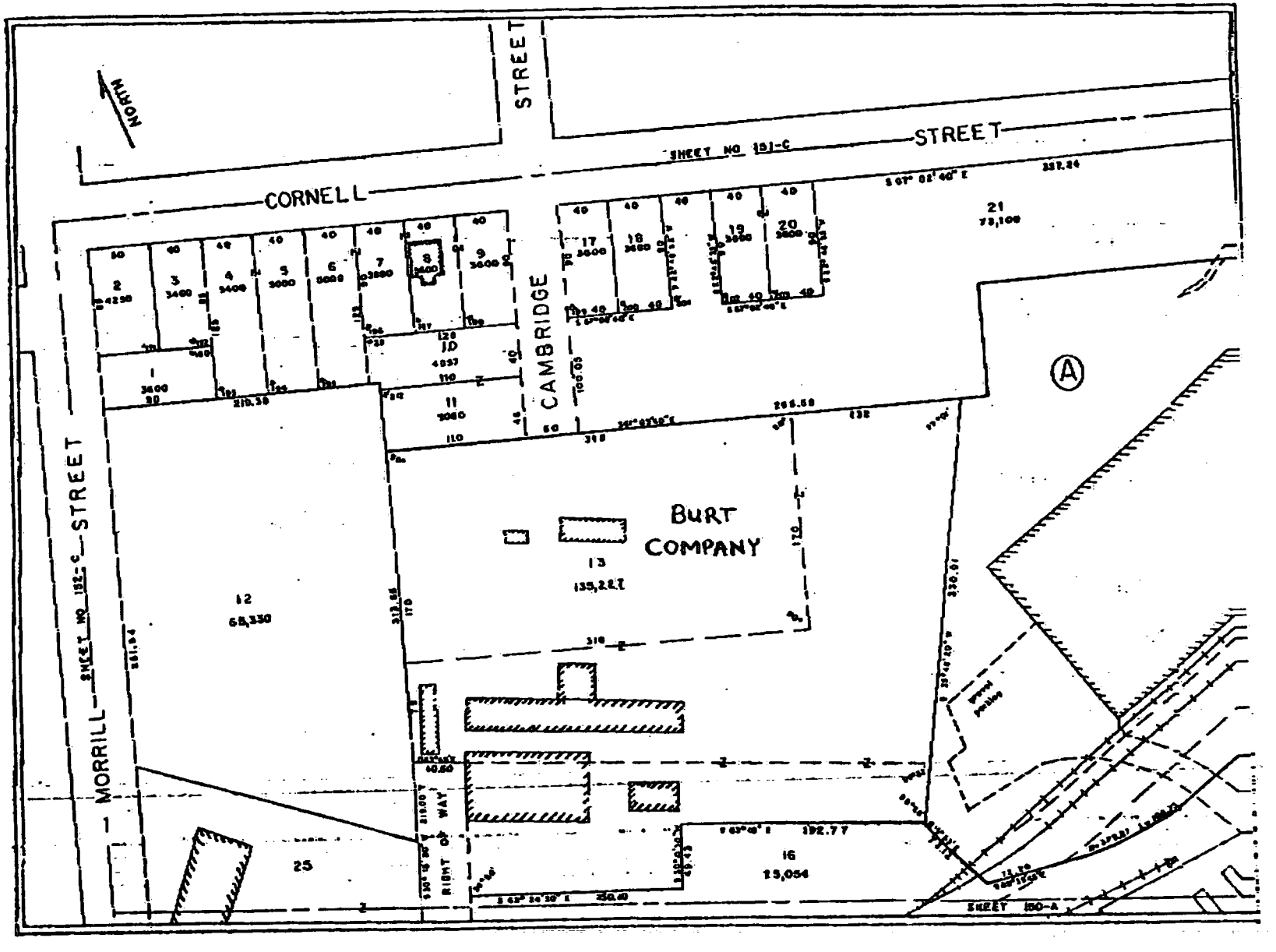

NORTH
STREET
CORNELL
STREET
SHEET NO 151-C
CAMBRIDGE
STREET
MORRILL
SHEET NO 152-C
BURT
COMPANY
A
SHEET 150-A
RIGHT OF WAY

APPENDIX G

OVERPACK DRUM INVENTORY

OVERPACK DRUMS (listed by number)

* - Overpack Inventory (4/5/91) - See Legend on Page 5.

O.P.-1	1	cardboard & wood from poolball shed
O.P.-2	1	cardboard from poolball shed
O.P.-3	1	cardboard from poolball shed
O.P.-4	1	cardboard & wood from poolball shed
O.P.-5	1	cardboard from poolball shed
O.P.-6	1	cardboard from poolball shed
O.P.-7	2	poolballs
O.P.-8	2	poolballs
O.P.-9	2	poolballs
O.P.-10	2	poolballs
O.P.-11	2	poolballs
O.P.-12	2	poolballs
O.P.-13	2	poolballs
O.P.-14	3	poolballs
O.P.-15	4	poolballs
O.P.-16	1	poolballs
O.P.-17	4	poolballs
O.P.-18	4	poolballs
O.P.-19	4	poolballs
O.P.-20	4	poolballs
O.P.-21	1	poolballs
O.P.-22	4	poolballs
O.P.-23	4	poolballs
O.P.-24	4	poolballs
O.P.-25	4	poolballs
O.P.-26	1	poolballs
O.P.-27	4	poolballs
O.P.-28	1	poolballs, plastic & floor sweepings from shed
O.P.-29	1	35-gal drum of pool ball trimmings (125 lbs.)
O.P.-30	1	55-gal drum of trimmings (200 lbs.)
O.P.-31	1	55-gal drum of trimmings (200 lbs.)
O.P.-32	1	35-gal drum (liquid) Mogul Corp., Chagrin Falls, OH (1(lbs.)
O.P.-33	1	35-gal drum (liquid) Mogul Corp., Chagrin Falls, OH (1(lbs.)
O.P.-34	1	35-gal drum (liquid) Mogul Corp., Chagrin Falls, OH (1(lbs.)
O.P.-35	1	35-gal drum (liquid) Mogul Corp., Chagrin Falls, OH (1(lbs.)
O.P.-36	1	25, 10, 5 gal drums, 50 lb. bag, Imperial Colors Pigment ar Toner (100 lbs.)
O.P.-37	1	10 lbs. Ferro Colors, Cleveland, OH (6 empty buckets) (5 lbs.)
O.P.-38	5	Five 100-lb. bags, Chemtron Corp. Pigment Division, Holland MI (500 lbs.)
O.P.-39	5	35-gal drum Plaskon, Toledo, OH (50 lbs.)
O.P.-40	1	Two 35-gal drums DayGlo Pigment, Cleveland, OH (50 lbs.)
O.P.-41	1	[illegible] Chemical Co., Boston, MA
O.P.-42	1	55-gal drum Tecsol
O.P.-43	1	35-gal drum Cadmium Yellow, General Color Co., Newark, N (50 lbs.)

OVERPACK DRUMS (listed by number)

O.P.-44	5	35-gal drum Green #5, Shepard Chemical Co., Cincinnati, OH (50 lbs.) 5 lbs. Argyle Green, Paul Uhlich & Co., New York, NY 10 lbs. Heliogen Green toner, General Aniline & Film Corporation, New York, NY 10 lbs. Imperial Pigment Colors, Glens Falls, NY 5 lbs. Resin Orange, National Aniline Division, New York, NY 5 lbs. Blue, Claremont PolyChemical Corp., NY 15 lbs. C-10 Tungsten Powder, Li Tungsten Corp., NY 10 lbs. Brass Powder, New Jersey Zinc Co.
O.P.-45	5	3 containers of dye, blue, orange and maroon, no names (150 lbs.)
O.P.-46	5	2 bags LeHigh Leaded Zinc Oxide, New Jersey Zinc Co. 1 bucket powdered lead (no name) (280 lbs.)
O.P.-47	5	25-gal drum Billard Ball Scarlet, H. Kohnstamm & Co., New York, Chicago 1 bag regular shellac (50 lbs.)
O.P.-48	1	35-gal drum dye, billard balls & cutouts (150 lbs.)
O.P.-49	1	Plastic, dye & billard balls (150 lbs.)
O.P.-50	1	DayGlo Blue, 35-gal drum F.F. Wood Rosin
O.P.-51	3	P. Silica bags
O.P.-52	3	P. Silica bags
O.P.-53	3	P. Silica bags
O.P.-54	3	P. Silica bags
O.P.-55	3	P. Silica bags
O.P.-56	3	P. Silica bags
O.P.-57	3	P. Silica bags
O.P.-58	3	P. Silica bags
O.P.-59	3	P. Silica bags
O.P.-60	3	P. Silica bags
O.P.-61	3	P. Silica bags
O.P.-62	3	P. Silica bags
O.P.-63	3	P. Silica bags
O.P.-64	3	P. Silica bags
O.P.-65	3	B.A. 29, 8 bags
O.P.-66	3	Calcium Chloride
O.P.-67	1	Plastic, floor sweepings & cardboard
O.P.-68	4	Wood from floor
O.P.-69	4	Wood from floor
O.P.-70	4	Wood from floor
O.P.-71	4	Wood from floor
O.P.-72	4	Wood from floor
O.P.-73	4	Wood from floor
O.P.-74	4	Wood from floor
O.P.-75	4	Wood from floor
O.P.-76	1	Solka Floc
O.P.-77	1	Solka Floc
O.P.-78	1	Solka Floc
O.P.-79	1	Solka Floc
O.P.-80	1	Solka Floc
O.P.-81	1	Solka Floc
O.P.-82	1	Solka Floc
O.P.-83	1	Solka Floc
O.P.-84	1	Solka Floc
O.P.-85	1	Solka Floc
O.P.-86	1	Solka Floc

OVERPACK DRUMS (listed by number)

O.P.-87	1	Solka Floc
O.P.-88	1	Solka Floc
O.P.-89	1	150-lb. bag MicroFibres, Inc.
O.P.-90	1	MicroFibres, Inc.
O.P.-91	1	MicroFibres, Inc.
O.P.-92	1	MicroFibres, Inc.
O.P.-93	1	Florence Green, Seal 8, Zinc Oxide (lead free)
O.P.-94	1	Florence Green, Seal 8, Zinc Oxide (lead free)
O.P.-95	1	Florence Green, Seal 8, Zinc Oxide (lead free)
O.P.-96	3	Florence Green, Seal 8, Zinc Oxide (lead free)
O.P.-97	5	Florence Green, Seal 8, Zinc Oxide (lead free)
O.P.-98	1	Florence Green, Seal 8, Zinc Oxide (lead free)
O.P.-99	1	Florence Green, Seal 8, Zinc Oxide (lead free)
O.P.-100	1	Florence Green, Seal 8, Zinc Oxide (lead free)
O.P.-101	5	Ground Lead Monosilicate
O.P.-102	5	Ground Lead Monosilicate
O.P.-103	5	Ground Lead Monosilicate
O.P.-104	5	Ground Lead Monosilicate
O.P.-105	5	Ground Lead Monosilicate
O.P.-106	5	Ground Lead Monosilicate
O.P.-107	5	Ground Lead Monosilicate
O.P.-108	5	Ground Lead Monosilicate
O.P.-109	5	Ground Lead Monosilicate
O.P.-110	5	Ground Lead Monosilicate
O.P.-111	5	Ground Lead Monosilicate
O.P.-112	1	Floor Sweepings
O.P.-113	4	Wood from floor and 1/2 barrel of dye
O.P.-114	4	Wood from floor
O.P.-115	3	Wood from floor
O.P.-116	4	Wood from floor
O.P.-117	4	Wood from floor
O.P.-118	4	Wood from floor
O.P.-119	1	Plastic cardboard, poolballs with lead dust
O.P.-120	1	150-bag MicroFibres & cardboard with lead dust
O.P.-121	4	Wood from floor
O.P.-122	4	Wood from floor
O.P.-123	1	Wood & floor sweepings
O.P.-124	1	Floor sweepings
O.P.-125	1	35-gal drum blue dye
O.P.-126	1	Plastic cutouts with lead dust
O.P.-127	1	Plastic cutouts with lead dust
O.P.-128	1	Plastic cutouts with lead dust
O.P.-129	1	Plastic cutouts with lead dust
O.P.-130	1	Plastic cutouts with lead dust
O.P.-131	1	Plastic cutouts with lead dust
O.P.-132	1	Plastic cutouts with lead dust
O.P.-133	1	Plastic cutouts with lead dust
O.P.-134	1	Plastic cutouts with lead dust
O.P.-135	1	Plastic cutouts with lead dust
O.P.-136	1	Plastic cutouts with lead dust
O.P.-137	1	Plastic cutouts with lead dust
O.P.-138	1	Plastic cutouts with lead dust
O.P.-139	1	Plastic cutouts with lead dust
O.P.-140	1	Plastic cutouts with lead dust

OVERPACK DRUMS (listed by number)

O.P.-141	1	Enamel Plus, screen process ink, barium sulfate NJZ New Jersey Zinc Company PDI Edison, NJ MW200 Pfizer, New York, NY
O.P.-142	1	Tyvek, gloves, etc.
O.P.-143	1	20-gal drum of oil
O.P.-144	1	20-gal drum of oil
O.P.-145	1	35-gal drum of alkaline material, Mogul Corp.
O.P.-146	1	35-gal drum of alkaline material, Chagrin Falls, OH
O.P. 147	1	20 gal drum of oil
O.P.-148	1	15-gal bucket PDI, five 1-gal cans PDI various colors, nine
	1	1-gal cans of paint, one 1-qt can of paint thinner, one
		5-lb. can Sta-Roc cement paint, one 1-gal can Mineralic pull-in compound, twelve 1-qt. cans screen process ink various colors, three 1-qt cans paint, one 1-qt. can furniture polish, one 5-lb. can white lead, two 1 qt. cans John-Mansville #20 plastic refractory cement and for resetting fire brick, one 1-gal can roof cement, one 5-gal can roof cement
O.P.-149	1	Ground plastic chips and floor sweepings
O.P.-150	1	Ground plastic chips and floor sweepings
O.P.-151	1	Ground plastic chips and floor sweepings
O.P.-152	1	Ground plastic chips and floor sweepings
O.P.-153	1	Ground plastic chips and floor sweepings
O.P.-154	1	Ground plastic chips and floor sweepings
O.P.-155	1	Ground plastic chips and floor sweepings
O.P.-156	1	Ground plastic chips and floor sweepings
O.P.-157	1	Floor sweepings and poolballs
O.P.-158	5	35-gal drum ChemTreat on-line cleaner (sample 1)
O.P.-159	5	35-gal drum AquaTreat (sample 2)
O.P.-160	5	25-gal drum unknown liquid (sample 3)
O.P.-161	5	One 5-gal bucket unknown liquid (sample 4) One 5-gal bucket unknown liquid (sample 5)
O.P.-162	1	35-gal drum ground plastic chips and floor sweepings 10-gal drum purple dye (no name)
O.P.-163	5	20-gal drum ground plastic chips & floor sweepings
O.P.-164	5	35-gal drum ground plastic chips & floor sweepings
O.P.-165	5	35-gal drum ground plastic chips & floor sweepings
O.P.-166	5	35-gal drum ground plastic chips & floor sweepings
O.P.-167	5	40-gal drum ground plastic chips & floor sweepings
O.P.-168	1	35-gal drum ground plastic chips & floor sweepings
O.P.-169	5	35-gal drum ground plastic chips, floor sweepings & fiberglass resin mixed in
O.P.-170	5	35-gal drum ground plastic chips, floor sweepings
O.P.-171	5	25-gal drum ground plastic chips, floor sweepings, one 40-lb. bag zinc sterate
O.P.-172	5	40-gal drum ground plastic chips, floor sweepings (looks like oil mixed with it)
O.P.-173	5	Three 5-gal buckets of fiberglass resin, one 1-gal fiberglass resin, two 5-gal buckets resin solution

OVERPACK DRUMS (listed by number)

O.P.-174	5	One 5-gal bucket BYK (A501) Chemie Wallingford, CT, floor sweepings, 1-pt. bottle chloride G #1330, 1-pt. bottle chloride #1322, 1-pt. bottle alkalinity E #1320, one 1/2-pt. alkalinity E #1320, one-2 oz. bottle chloride F #1326, one-2 oz. bottle alkalinity D #1319, one-2 oz. bottle alkalinity C #1319, one 2-oz. bottle pH indicator A #1317, one 1/2 oz. bottle alkalinity E, one 4 oz. bottle TeraPrint Orange ZR liquid, one 4 oz. bottle Tera Print Black 300 Re-liquid, one 5-gal bucket of cutting fluid emulsion, one 1-gal bucket cutting oil 401, three 1-gal can oily liquid, one 5-gal bucket ColorAid wetting agent
O.P.-175	5	One 5-gal. bucket foundation coating, two 2 1/2-gal bucket KilSludg #VM-540, two 2 1/2-gal buckets of oily liquid
O.P.-176	5	One 5-pail paint, one 1-gal can Urethan adhering vinyl #2854, one 4-gal can ParaBond M-417 adhesive, one 1-gal can polyester product contains styrene, vinyl toluene, floor sweeping with paint and fiberglass resin
O.P.-177	1	Thermoplastic material (ground pellets)
O.P.-178	1	Thermoplastic material (ground pellets)
O.P.-179	1	Thermoplastic material (ground pellets)
O.P.-180	1	Thermoplastic material (ground pellets)

LEGEND:

1 - Overpack Drum Storage Area

2 - Overpack Lids Only - No Drum Located

3 - Overpack Not Located or Inside Trailer and Label Not Visible

4 - Empty Overpacks In Storage Garage/Shed

5 - Overpacks Located in Trailer

APPENDIX H

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION LETTER TO EPA NEW ENGLAND REGIONAL LABORATORY

STATE OF MAINE
Department of Environmental Protection

MAIN OFFICE: RAY BUILDING, HOSPITAL STREET, AUGUSTA
MAIL ADDRESS: State House Station 17, Augusta, 04333
207-289-7688

JOHN R. McKERNAN, JR.
GOVERNOR

DEAN C. MARRIOTT
COMMISSIONER

March 28, 1991

Mr. David McIntyre
EPA New England Regional Lab
60 Westview Street
Lexington, MA. 02173

Dear Dave:

The purpose of this letter is to review the Department of Environmental Protection (DEP) understanding of our recent discussions concerning the Burt Co. site in Portland, Maine.

The Burt Co. Site was reported to the DEP in March of 1990. Initial investigations revealed that bags of lead monosilicate and dyes had been strewn about the site by vandals After unsuccessfully attempting to convince the current owner, Mr. Norman Reef, to clean up the site the DEP secured the contaminated soil, dyes and lead monosilicate in 180 drums on site. I have asked Dave Wright and Clayton Maybee of my staff to contact Mary Ellen Stanton with information on site history and investigations to date.

At present the drums remain on site. The site is only partially fenced and recently vandals have knocked over some of the drums and damaged the security (snow) fence that was placed around the drums. The DEP is concerned that the drummed material is a hazard to children who may play on site since the lead levels are very high (EP Tox of 7700 ppb). The best course of action would be to remove the drums as soon as possible. In addition there may be hazardous materials located in the partially burned structures on the property. Investigation within the production buildings has not been conducted because the buildings are too structurally unstable to enter.

As we discussed, the DEP's plans are to attempt to schedule a final meeting with the site owner and former operators. The PRPs will be informed that the site must be cleaned up to the Department's satisfaction, either voluntarily or following issue of a clean up order. If an order is issued and the PRPs fail to comply, the matter will be referred to the Attorney General's Office for enforcement and to EPA Removal for clean up action and further enforcement.

If the above does not meet with your understanding, please give me a call so we can discuss the site.

Sincerely,

Denise

Denise Messier
Division of Site Investigation & Remediation
Bureau of Oil and Hazardous Materials Control

cc: Deb Hanley, DEP
David Wright, DEP
Clayton Maybee, DEP
Mary Ellen Stanton, EPA

APPENDIX I

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
PRELIMINARY ASSESSMENT

FILE COPY

STATE OF MAINE

Department of Environmental Protection

MAIN OFFICE: RAY BUILDING, HOSPITAL STREET, AUGUSTA
MAIL ADDRESS: State House Station 17, Augusta 04333
207-289-7688

JOHN R. McKERNAN, JR.
GOVERNOR

DEAN C. MARRIOTT
COMMISSIONER

MEMORANDUM

TO: Sharon Hayes, USEPA Superfund Support Section Region I

FROM: Clayton Maybee, Maine Department of Environmental Protection, BOHMC

DATE: December 11, 1990

RE: Preliminary Assessment
Burt Company
1 Cambridge Street, Portland
Cumberland County, Maine 04103
CERCLIS Number: MED985468024

INTRODUCTION

The Burt Company site in Portland, Maine was brought to the attention of the Maine Department of Environmental Protection, (DEP), on March 5, 1990, when drums of chemicals were discovered following a fire at that location in early March of 1990. A site visit was made by the Bureau of Oil and Hazardous Materials Control (BOHMC) Response Services of the State of Maine DEP and the site was placed on CERCLIS on June 25, 1990. A preliminary site assessment was conducted by the division of Site Investigation and Remediation on September 20, 1990.

DESCRIPTION AND HISTORY

Identification Information

The Burt Company site is owned by Norman Reef of 66 Pearl Street, Portland Maine. The site is located on 1 Cambridge Street, Portland, Maine, and is denoted as lot No. 13A, of tax map 151A, for Portland. Figure 1 shows the location of Burt Company on the tax map.

Property Description

The Burt Company site is located in a mixed use industrial and residential area of Portland in Cumberland County, Maine. The lot is over three acres in size, bordered by

lots 11 and 21 to the North, lot 15 to the West, lot 16 to the South, and lot 12 to the West. These lots are industrial with the exception of lot 11 which is residential. The population of Portland is 62,000 and the population of surrounding Cumberland County is 243,000. (MEDHR, 1989 census, phone communication). Figure 2 is a topographic map showing land within a one mile radius of the site

The site is easily accessed on the North by Cambridge Street. At the time of initial DEP investigation the facility was partially surrounded by a fence, but there was no gate at the main entrance and the fence did not exclude access. A gate was installed by Norman Reef under Departmental Order, (letter to Norman Reef from Steve Eufemia, April 17, 1990), at the Cambridge Street entrance to restrict access but has since been removed. There are three buildings on the site, a storage garage, an office building, and an operations building. The operations building was damaged by fire and appears to be structurally unsound. Milliken Brook flows on the southern perimeter of the property and a smaller feeder stream flows through the property. (figure 3).

Facility Activity/History

The Burt Company site is at the location of the former Burt Company. Burt Company, an assumed name for the Brothers Corporation, was a manufacturer of plastic billiard balls and poker chips. Burt Company was owned by Douglas Burt and incorporated in April 1985. Burt Company was sold to John Kendall of Chipco International in July of 1985. The Burt Company ceased operations in September of 1988 and its assets were seized by the bank in December of 1988. The Burt Company site was seized by the U. S. Internal Revenue Service on July 26, 1989. Following that date, Norman Reef acquired the property. A fire destroyed the operations building in December of 1989. Bekar Industries, an asbestos abatement contractor, rented the office building for an unknown period of time before the fire. People's Heritage Bank and Sun Savings Bank have threatened to foreclose on the property.

A second fire, involving a drum of Tech Sol solvent, was set by vandals in March of 1990. The DEP was then notified of the presence of potentially toxic substances by the Portland City Fire Department. An investigation was made by the State of Maine DEP on March 22, 1990. (Hodgkins, MDEP, Visit to Burt Company, March 26,1990).

At the storage building, vandalism following the first fire resulted in lead monosilicate and dye material being spread on the snow. DEP observers noted that children and dogs had tracked dyes through the snow on the site. Street people

were reported living in the abandoned buildings and children had been collecting billiard balls which were coated with dye. The area where dyes and lead monosilicate were spilled was covered with plastic sheeting by the DEP and later contained. Other bags of lead monosilicate were torn by vandals and contents were scattered widely throughout the site. Laboratory analyses of the soils containing the spilled dyes indicated Barium at 3600 ppm EP Toxicity. The analyses also indicated lead at 7700 ppm EP Toxic in the soils where lead monosilicate was spilled. Table 1 shows laboratory analyses of the soils containing dyes and lead monosilicate.

In the burned operations building of the facility, resinous substances were found in pools on the floor. Drums of unknown substances were stored on the site. Most of these drums appeared in good condition although some had been compromised accounting for a potential source of the spilled dyes. Some of the drums were marked and contents included the brand name 'Mogal', Urea Molding Compound, and some marked "alkaline materials". Barrels of polystyrene (Co-Pel) pellets, that had been dyed different colors, were found overturned. There where numerous small containers of household chemicals also found at this site.

After the current owner failed to initiate a removal at the site, the DEP BOHMC Response Services initiated removal operations from May 23, 1990 to June 7, 1990. An area where soil appeared stained was sampled for organics on May 23, 1990. Results were negative except for trichlorobenzene levels of 211 ug/kg. Laboratory analyses of the stained soil area is shown in Table 1. Dyes, lead monosilicate, plastics, and contaminated materials were placed in drums at the site. Additionally 20 cubic yards of soil contaminated with dyes and lead monosilicate was piled on the site. Further removal is planned in the basement of the burned operations building. 180 overpacked drums are on site awaiting disposal. Appendix A is an inventory of the contents of the drums. Further cleanup of the operations building is expected to produce 15 additional drums. The owner has been ordered by DEP to properly dispose of these Hazardous Wastes. (DEP-BOHMC Enforcement letter, September 17, 1990) As of December 7, 1990, there has been no response to the DEP order. A post removal soil sample collected in front of the storage building where dye and lead mohosilicate had been removed was above background for lead (190 ppm) and barium (3400). (table 1).

Asbestos had been abandoned in an open dumpster on the site. The asbestos was reported by the DEP-BOHMC to the DEP-Bureau of Solid Waste and has been removed.

Buried material was noted in an area by the stream during a site visit by the MDEP on September 20, 1990 . Erosion has

exposed plastics and other debris in filled areas. Evidence of several filled areas can be seen on the site. In addition demolition debris from the fire has been placed on the stream bank.

WATER USE

Water Supplies

The heavily populated area in the vicinity of the site, including Falmouth and Pleasant Hill, is served by the Portland municipal water supply. The Portland water supply comes from Sebago Lake 13 miles from the site. The extent of private well use is not known. (Portland City Water District, telephone communication, September 1990).

Surface Water

A small feeder stream flows to the East through the site and connects with Milliken Brook on the southern perimeter of the property. (figure 3). Milliken Brook is a tributary of Fall Brook which flows into Back Cove approximately one mile to the south. Back Cove is part of the tidal waters of the Casco Bay system.

CONCLUSIONS

The facility is located in a mixed use commercial and residential area serviced by municipal water supply. Site access is unrestricted and children come into contact with hazardous substances including high concentrations of barium, chromium, and lead. There are drums of both known and unknown substances present and there have been spills of chemicals including but not limited to lead monosilicate and dyes. Unknown and potentially hazardous material is present in the burned building. Plastics have been found in filled areas indicating a potential practice of burying hazardous substances on site. The present owner is reluctant in cooperating with the DEP in site cleanup activities.

RECOMMENDATION

The Maine DEP recommends a High Priority Screening Site Inspection due to following:

1) Known presence of heavy metals including Barium and Lead in excess of State and Federal standards and

2) potential for Chromium, and other heavy metals elsewhere on the property.

3) Other unknown and potentially hazardous chemicals stored, spilled, and potentially disposed of on the property.

4) Potential hazardous chemicals generated by fire at the site of the burned building

5) Area of high population density and unrestricted access with evidence of frequent human contact.

6) Proximity to sensitive waters of the Casco Bay region.

REFERENCES

Analytics Environmental Laboratory Inc., Laboratory Results, May 25, 1990

DeLorme Mapping Company, Twelfth Edition, 1987

Eufemia, S.J. State of Maine DEP, Letter to Norman Reef, April 17, 1990.

Hodgkins, N.J., State of Maine DEP, Memorandum RE: Visit to Burt Company, in Portland, March 26, 1990.

Hodgkins, N.J., State of Maine DEP, Potential Hazardous Waste Site-Site Identification, June 13, 1990.

LRS Enviro Services, Inc., Laboratory Results, June 11, 1990

LRS Enviro Services, Inc., Job sheets including inventory of overpacked drums., May 23, 1990

Maine Department of Environmental Protection, Laboratory Results, April 19, 1990.

Maine Department of Environmental Protection, Laboratory Results, September 29, 1990.

Maine Department of Environmental Protection, Letter to Norman Reef, September 17, 1990

Maine Department of Human Resources, 1989 Census Information, (Phone Communication, November 1990).

Portland City Water District, telephone communication, September 1990)

Table 1

DEP Laboratory Analyses of Spilled Materials

Sample	Parameter	Conc.	Units
Sample 1 soil with dyes 3/27/90	Silver by flame	1.9	mg/kg
	Arsenic by furnace	15	mg/kg
	Cadmium by flame	4200	mg/kg
	Chromium by flame	46000	mg/kg
	Mercury by vapor	.30	mg/kg
	Nickel by flame	35	mg/kg
	Lead	92	mg/kg
	Selenium by flame	< 15	mg/kg
	Barium by flame	92000	mg/kg
	Barium EP Toxic	3600	ppm
	Cadmium EP toxic	.47	ppm
	Chromium EP toxic	.02	ppm
Sample 2 soil with lead 3/27/90	Lead EP toxic	7700	ppm
Sample 3 stained soil 5/30/90	o & p Dichlorobenzene	211	ug/kg
Sample 4 post removal soil 9/20/90	Silver by furnace	.02	mg/kg
	Arsenic by furnace	3	mg/kg
	Cadmium by furnace	27	mg/kg
	Chromium by flame	9.35	mg/kg
	Mercury by vapor	< .15	mg/kg
	Lead	190	mg/kg
	Selenium by flame	< 2	mg/kg
	Barium by flame	3400	mg/kg
	Barium EP Toxic	1.9	ppm
	Lead EP toxic	.20	ppm

Figure 1. Location of the Burt Company on the Portland City Tax Map

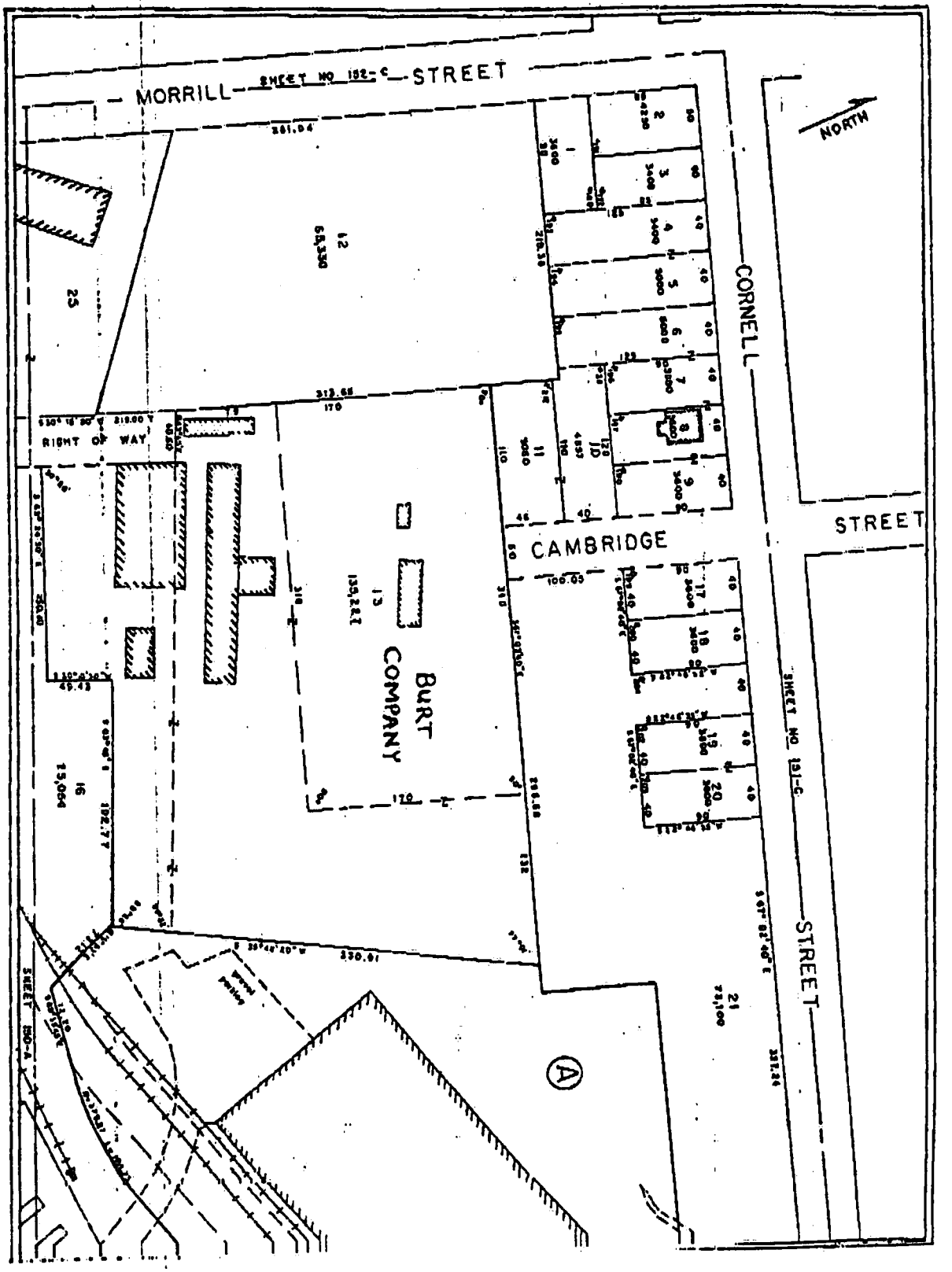
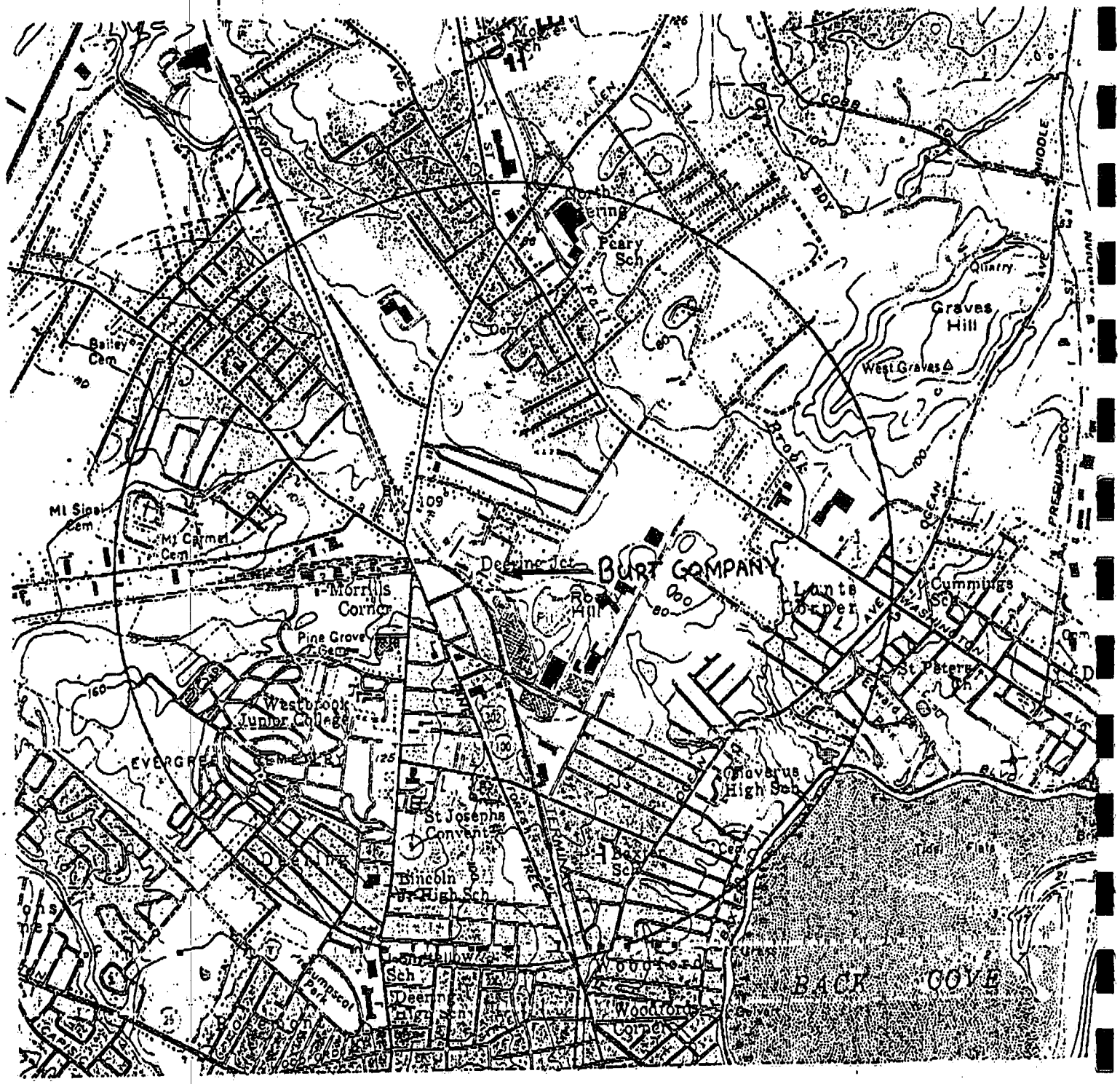


Figure 2. Topographic Map Showing One Mile Radius From The Burt Company



SCALE 1:24 000

1 MILE

7000 FEET

1 KILOMETER

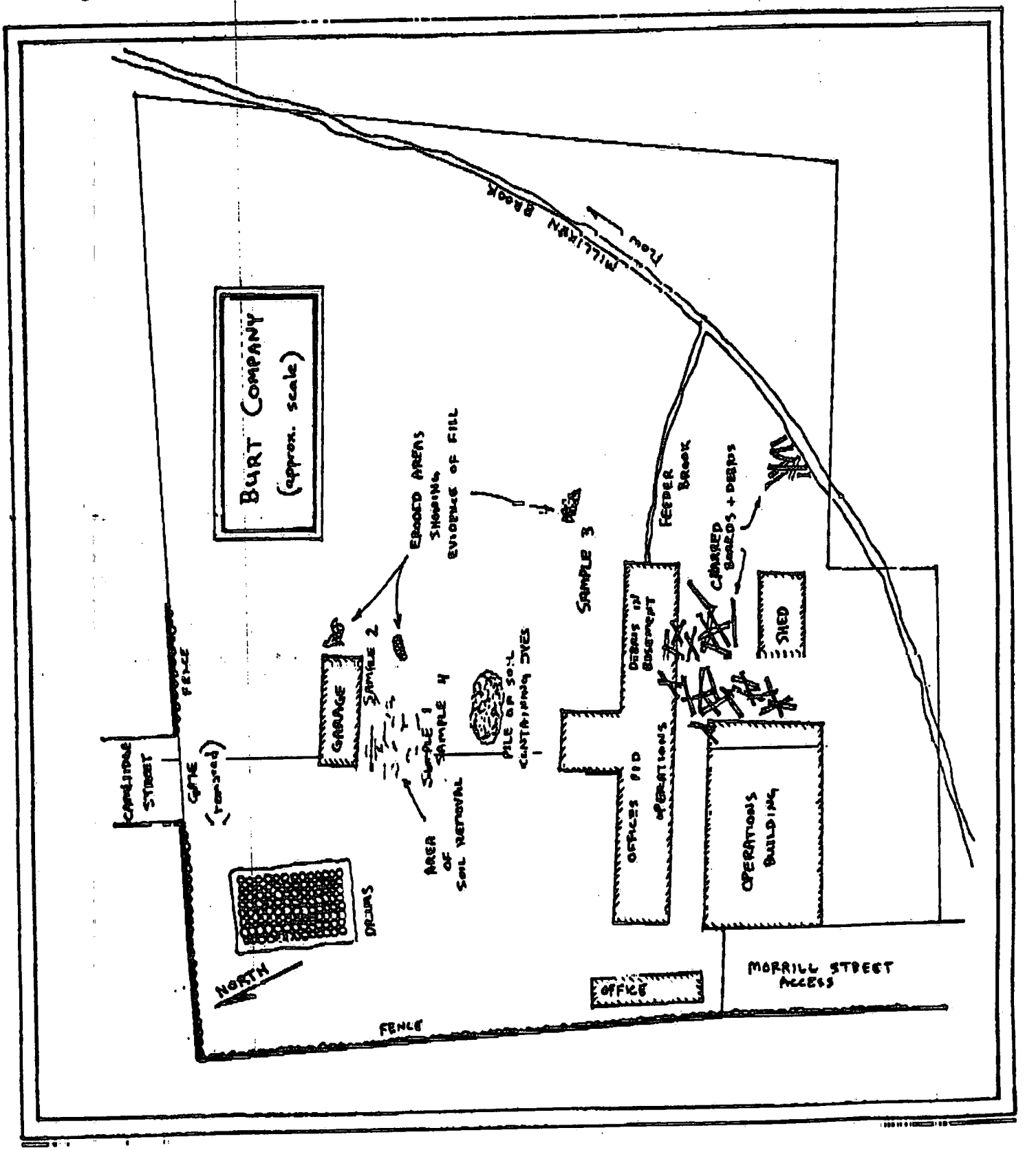
N

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 8.9 FEET

MAINE

QUADRANGLE LOCATION

Figure 3. Burt Company Site Map



APPENDIX J

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
DRAFT ADMINISTRATIVE ORDER

DRAFT

IN THE MATTER OF

BURT COMPANY SITE Portland, Cumberland County, Maine PROCEEDING UNDER 38 M.R.S.A. SECTION 1365, UNCONTROLLED HAZARDOUS SUBSTANCE SITES	)	DESIGNATION OF UNCONTROLLED HAZARDOUS SUBSTANCE SITE AND ADMINISTRATIVE ORDER

Jurisdiction

This Designation of Uncontrolled Hazardous Substance Site is made pursuant to the authority vested in the Commissioner of Environmental Protection ("Commissioner") under the Uncontrolled Hazardous Substance Sites Law, 38 M.R.S.A. Sections 1361-1371.

Findings of Fact

1. The Burt Company Site, hereinafter sometimes referred to as the "Site", refers to a parcel of land having a surface area of approximately 3.1 acres and any structures or improvements thereon, located in Portland, Maine. It includes the property owned by Norman Reef, identified as lot 13A on the City of Portland Tax Map 151A on file in the municipal offices. The Site is depicted in Attachment 1 which is attached hereto and made a part of this Designation.

2. The Burt Company Site is situated on the northeast side of the City of Portland. The Site is located in a mixed use (residential and commercial) urban area. DEP personnel have observed unrestricted access to the site and that children play in the area.

3. The Site is the location of the former Burt Company. The Burt Company was owned and operated by John Kendall of Chipco International from July 1985 to December of 1988.

4. The Burt Company was a manufacturer of plastic billiard balls and poker chips. The Burt Company ceased operations in September of 1988. During operation lead monosilicate was used at the site to give weight to the billiard balls and poker chips. Various dyes, some containing heavy metals, were used at the site to color the billiard balls and poker chips.

5. Two fires occurred at the facility, one in December of 1989 and a second in March of 1990. During this period vandalism caused bags of lead monosilicate and dyes to be torn and scattered widely throughout the site. Unknown materials are present in the basement of a burned building on the site.

6. The materials referred to in paragraphs 4 and 5 were stored or disposed in such a manner that they have been or are being discharged into the environment at, beneath or adjacent to the Site.

7. Soil samples were collected during the period from March, 1990 to September, 1990 from the Site and analyzed. The samples were found to contain the following hazardous substances:

Compound	Maximum Reported Concentration parts per billion (ppb) EP Toxic
Barium	3600
Lead	7700

The Maine DEP has established that materials may be identified as hazardous waste by characteristics of EP Toxicity (38 M.R.S.A. section 1301). The following concentrations are the minimum concentrations of contaminants for characteristic of EP toxicity.

Compound	Minimum Concentration for EP Toxicity parts per billion (ppb) EP Toxic
Barium	100
Lead	5.0

8. The compounds identified in paragraph 7 exhibit the following characteristics and pose a threat to the public health or safety or to the environment in the event that they are released into the environment:

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A. Barium

Barium is an extremely reactive metal that decomposes in water. Insoluble forms are not very toxic, but soluble forms are acutely toxic. Poisoning from soluble forms produces a strong, prolonged stimulant action on muscle tissue. Accidental ingestion of soluble barium salts has resulted in gastroentritis, muscle paralysis, and ventricular fibrillation and extra systoles.

(Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the USEPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985)

Barium is identified as a hazardous waste and is assigned the Hazardous Waste Number D005 under the Department's Hazardous Waste Management Rules.

B. Lead

Lead is a heavy metal. It is a reproductive hazard and also adversely affects the brain and central nervous system by causing encephalopathy and peripheral neuropathy. Chronic exposure to low levels of lead can cause subtle learning disabilities in children. Exposure to lead can also cause kidney damage and anemia, and may have adverse effects on the immune system.

(Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the USEPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985)

Lead is identified as a hazardous waste and is assigned the Hazardous Waste Number D008 under the Department's Hazardous Waste Management Rules.

9. MEDEP has twice notified Norman Reef by certified letter of requirements for cleanup.

A. On April 17, 1990, MEDEP Division of Response Services sent a certified letter to Norman Reef requesting that the site be secured and that he sample, identify, remove, and dispose of the waste material in a manner acceptable to the Department. The letter stated that if a response was not made within 48 hours the MEDEP would initiate cleanup and the owner would be held liable for the costs incurred during such a cleanup. The letter was accepted but the requested action was not taken by Norman Reef.

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B. LRS Environmental was contracted by the MEDEP to contain the hazards present at the Site and began operations at the site in May of 1990.

C. On September 17, 1990, the MEDEP Division of Licencing and Enforcement sent a certified letter to Norman Reef requesting reimbursement for costs incurred by the containment operation and requesting proper disposal of the drums remaining on the site. The letter was accepted but to date Norman Reef has not complied with the request and has not indicated that he intends to.

D. On January 14, 1991 The MEDEP Division of Licensing and Enforcement referred the case to the Division of Site Investigation and Remediation for further action.

10. 38 M.R.S.A. Section 1362(1) defines "hazardous substance' as:

A. Any substance identified by the Board of Environmental Protection under [38 M.R.S.A.] Section 1319-0 [hazardous waste];

B. Any substance identified by the Board under [38 M.R.S.A.], Section 1319 [hazardous matter];

C. Any substance designated pursuant to the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980, Public Law 96-510, Sections 101 and 102 (Superfund);

D. Any toxic pollutant listed under the United States Federal Water Pollution Control Act, Section 307(a);

E. Any hazardous air pollutant listed under the United States Clean Air Act, Section 112;

F. Any imminently hazardous chemical substance or mixture with respect to which the Administrator of the United States Environmental Protection Agency has taken action pursuant to the United States Toxic Substances Control Act, Section 7; and

G. Waste oil as defined in [38 M.R.S.A.], Section 1303.

11. The substances listed in paragraphs 7,and 8 have been designated as hazardous wastes by the Board of Environmental Protection pursuant to 38 M.R.S.A. Section 1319-0. They are, accordingly, hazardous substances within the meaning of 38 M.R.S.A. Section 1362. These substances are being, or have been, stored, spilled, or disposed of at the site in such a manner that they have been or are being released or discharged into the soil.

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12. 38 M.R.S.A. Section 1362(2) defines "responsible party" as one or more of the following persons:

A. The owner or operator of the uncontrolled site;

B. Any person who owned or operated the uncontrolled site from the time any hazardous substance arrived there;

C. Any person who arranged for the transport or handling of a hazardous substance, provided that the hazardous substance arrived at the uncontrolled site; and

D. Any person who accepted a hazardous substance for transport, provided that the substance arrived at the uncontrolled site.

Based on the above Findings of Fact, the Commissioner concludes the following:

1. Hazardous substances as defined in 38 M.R.S.A. Section 1362 have been handled and disposed of at the Burt Company Site.

2. Hazardous substances handled and disposed of at the Site create a danger to the public health or safety or to the environment.

3. Continued danger to the public health or safety of any person or to the environment exists as a result of the continued presence of hazardous substances in soils at the Site and the unlimited access and proximity of the Site to residential areas of Portland.

4. The actual or threatened releases or discharges of hazardous substances in the area pose a threat or hazard to the public health, safety or welfare and to the natural environment.

5. Norman Reef is a responsible party as defined in 38 M.R.S.A. Section 1362.

6. Removal and possibly remedial action is necessary to abate the threat, danger, or hazard to public health or safety and to the environment posed by the Site.

THEREFORE, pursuant to 38 M.R.S.A. Section 1365, the Commissioner hereby DESIGNATES the Burt Company Site in Portland, Maine an Uncontrolled Hazardous Substance Site.

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ORDER, Norman Reef, as Responsible Party, is hereby ordered to :

1. Within 30 days, arrange for and carryout to the satisfaction of the MEDEP:

   a. The disposal at a licensed RCRA facility of all hazardous wastes containerized by the MEDEP. Proof of compliance will be a copy of the hazardous waste manifest(s) being sent to the MEDEP. A licenced hazardous waste transporter must be used.

   b. Containerization and analysis by a qualified contractor of all remaining potential hazardous wastes at the site in a manner approved of by the Department.

2. Within 60 days:

   a. Arrange for and carryout disposal of all hazardous wastes containerized in 1b. above.

   b. Arrange for a qualified contractor subject to MEDEP approval, to conduct a Remedial Investigation and Feasibility Study to determine:

      i. The extent of contamination by hazardous substances remaining at the site.

      ii. The type of hazardous substances located at the site.

      iii. The quantity of hazardous substances located at the site.

      iv. Alternatives for Remediating the contaminants at the site to the satisfaction of the Department.

3. Within 30 days of approval of the contractor in 2b above, submit a Remedial Investigation Work Plan for MEDEP approval on how the Remedial Investigation will be conducted, including a time table for completion. If this workplan is unacceptable, the MEDEP shall notify the Responsible Party of the conditions causing the disapproval and within 30 days the responsible party shall submit a work plan addressing all DEP conditions. The final deliverable shall be a draft Remedial Investigation Report.

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4. Within 30 days of approval of the Remedial Investigation Work Plan per 3 above, the Responsible Party shall initiate the work plan, according to the schedule approved by the MEDEP in the Work Plan. Within 30 days of the copletion of work outlined in the Work Plan, the responsible Party shall submit a Draft Remedial Investigation Report to the DEP. The Department shall review the draft Remedial Investigation Report, and notify the Responsible Party of any additional investigations as warranted. The Responsible Party shall carryout investigations deemed necessary by the Department according to the schedule established by the Department. The final deliverable shall be a redrafted Remedial Investigation Report.

5. Within 30 days of approval of the redrafted Remedial Investigation Report, the Responsible Party shall submit a draft Feasiblity Study Work Plan for DEP approval, which will include an assessment of data gaps, proposals for gathering the necessary data, proposed methods of analysing which remedial technologies are appropriate for the site, how applicable remedial technologies will be screened, how remedial technologies trains will be assembled, and a schedule for completion of the Feasibility Study. The final product will be a draft Feasibility Study Report.

6. If, upon review of the draft Feasibility Study Work Plan, the Department notifies the Resposible party of any conditions which cause unaccepability, the Responsible Party shall address all such conditions in a revised draft Feasibility Work Plan within 30 days.

7. Within 30 days of Departmental approval of the Feasibility Study Work Plan, the Responsible Party shall implement the plan according to the approved schedule. If upon review of the draft Feasibility Study Report, the Department notifies the Responsible Party of any conditions which cause unacceptablity, the Responsible Party shall address all such conditions.

8. Within 30 days after the approval of the draft Feasiblity Study Report (RI/FS), the Responsible Party shall submit a Final Remedial Investigation and Feasibility Study Report.

9. Within 30 days of Departmental approval of the final RI/FS the Responsible Party shall take any action the Department determines is necessary to terminate or mitigate the danger or likelyhood of danger at the site within the time frame specified by the Department and to the Department's satisfaction.

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Rights of Review and Appeal

Norman Reef may apply to the Board of Environmental Protection for a hearing within 5 days of receipt of this order. The hearing shall be held within 5 days of receipt of the application. Within 7 days after the hearing, the Board shall make findings of fact and shall continue, revoke, or modify this Order.

DONE AND DATED AT AUGUSTA, MAINE THIS DAY OF , 1991.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
Dean C. Marriott, Commissioner

cgm
BURTDES5.doc

APPENDIX K

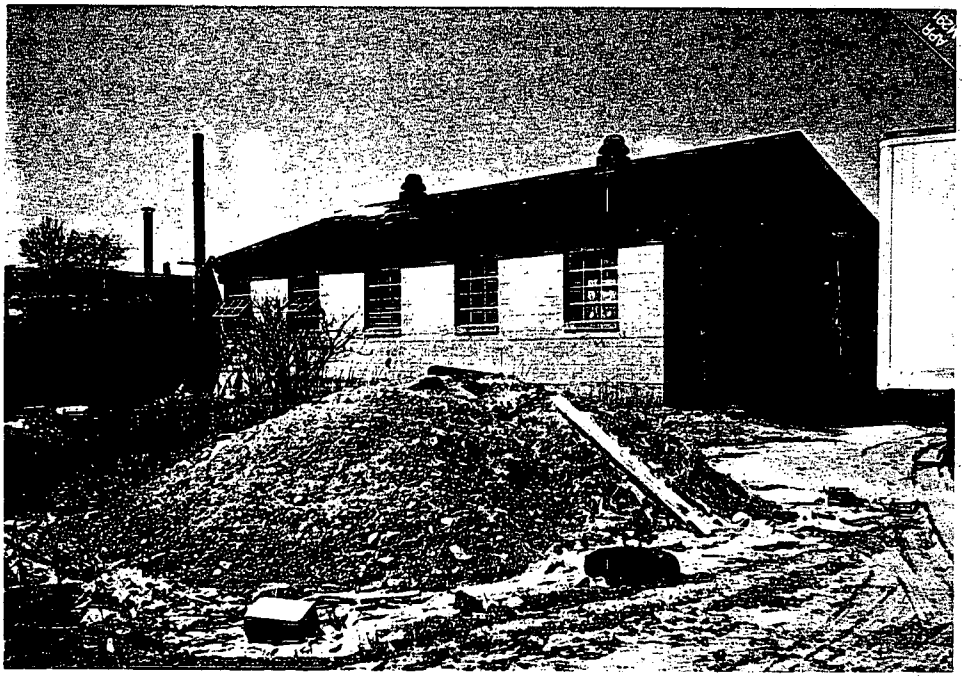
PHOTODOCUMENTATION LOG

PHOTOGRAPHY LOG SHEET

SCENE: OVERPACK DRUM STORAGE AREA (UNRESTRICTED ACCESS)
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 1 DATE: 04/05/91 TIME: 1112 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

SCENE: PURPLE DYE NEAR OVERPACK DRUM STORAGE AREA
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 2 DATE: 04/05/91 TIME: 1113 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

PHOTOGRAPHY LOG SHEET



SCENE: CONTAMINATED SOIL PILE (SAMPLES S005-7)
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 3 DATE: 04/05/91 TIME: 1115 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

SCENE: FIRE-DAMAGED SECTION OF FACILITY BUILDINGS
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 4 DATE: 04/05/91 TIME: 1116 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

PHOTOGRAPHY LOG SHEET

SCENE: STORAGE GARAGE (NOTE DAMAGE TO OVERHEAD DOORS)
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 5 DATE: 04/05/91 TIME: 1119 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

SCENE: ADDITIONAL VIEW OF FIRE-DAMAGED FACILITY BUILDING
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 6 DATE: 04/05/91 TIME: 1119 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

PHOTOGRAPHY LOG SHEET

SCENE: BLUE PIGMENT DRUM (SAMPLE S004) IN BASEMENT OF BURNED BUILDING
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 7 DATE: 04/05/91 TIME: 1121 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

SCENE: SMALL OFFICE BUILDING (LEFT) OCCUPIED BY STREET PEOPLE
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 8 DATE: 04/05/91 TIME: 1126 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

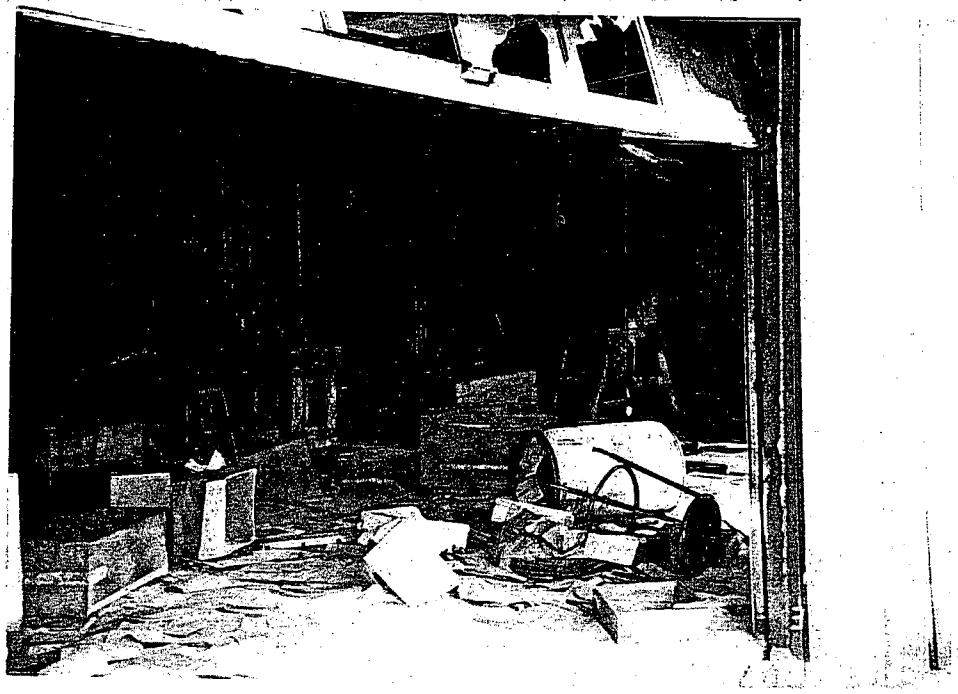
PHOTOGRAPHY LOG SHEET

SCENE: ALLEY BETWEEN PRODUCTION BUILDING AND BURNED BUILDING
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 9 DATE: 04/05/91 TIME: 1128 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

SCENE: WEST END BAY OF STORAGE GARAGE (SAMPLE S008 FROM SOIL IN FRONT)
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 10 DATE: 04/05/91 TIME: 1130 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

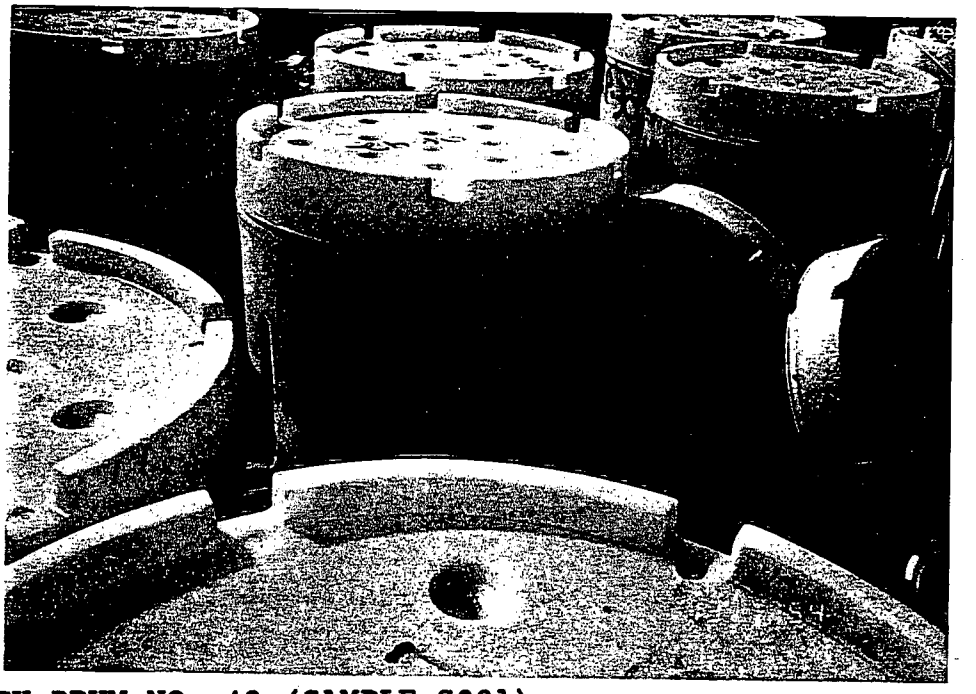
PHOTOGRAPHY LOG SHEET

SCENE: DEBRIS IN MIDDLE BAY OF STORGE GARAGE
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 11 DATE: 04/05/91 TIME: 1132 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230



SCENE: DEBRIS IN EAST END BAY OF STORAGE GARAGE
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 12 DATE: 04/05/91 TIME: 1132 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

PHOTOGRAPHY LOG SHEET

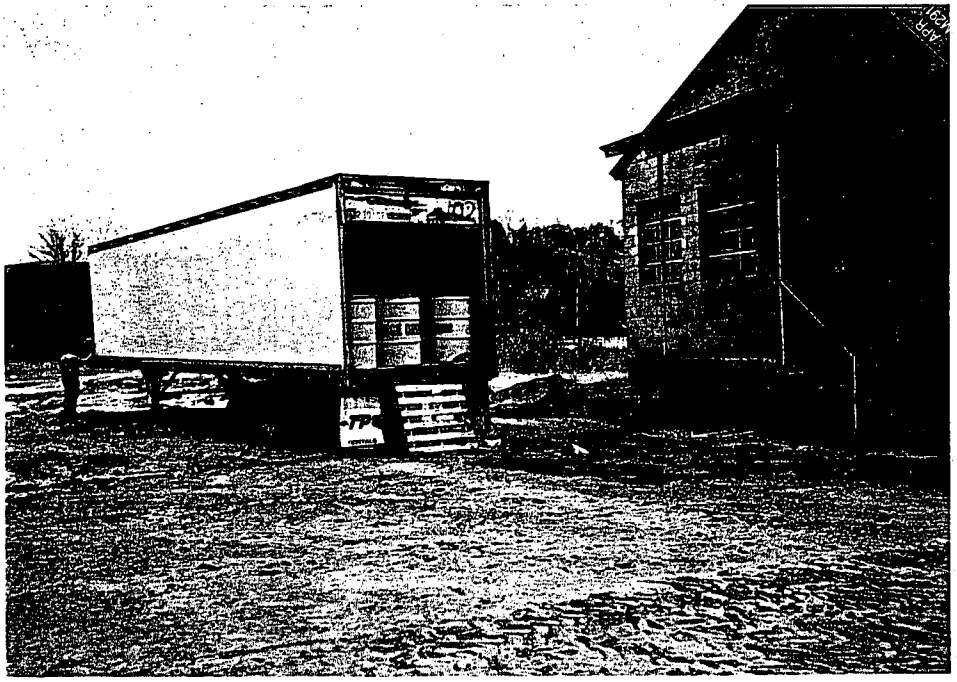


SCENE: OVERPACK DRUM NO. 42 (SAMPLE S001)
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 13 DATE: 04/05/91 TIME: 1354 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

SCENE: OVERPACK DRUM NO. 32 (SAMPLE S002)
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 14 DATE: 04/05/91 TIME: 1358 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

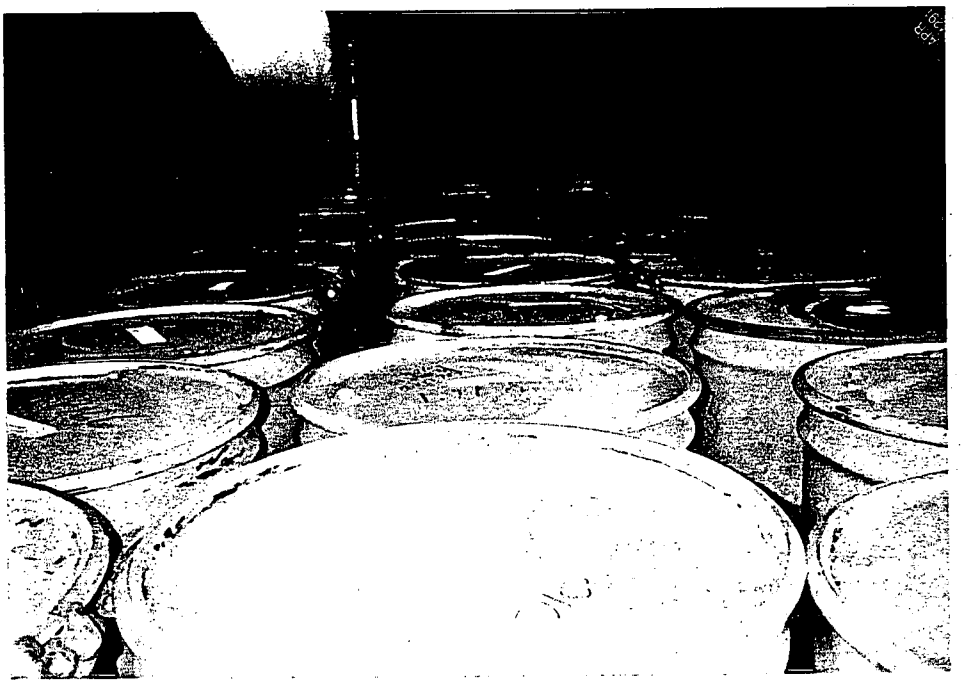
PHOTOGRAPHY LOG SHEET

SCENE: OVERPACK DRUM NO. 123 (SAMPLE S003)
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 15 DATE: 04/05/91 TIME: 1358 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

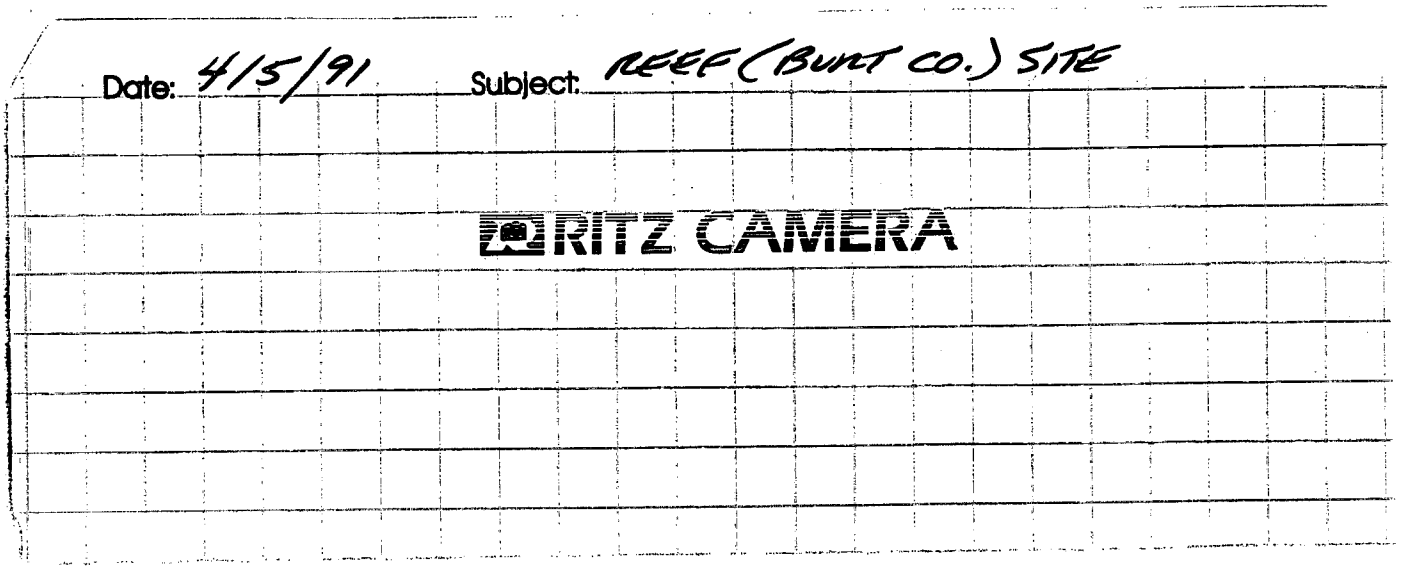


SCENE: BOX TRAILER USED FOR OVERPACK DRUM STORAGE
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 16 DATE: 04/05/91 TIME: 1359 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

PHOTOGRAPHY LOG SHEET



SCENE: INSIDE VIEW OF BOX TRAILER/OVERPACK STORAGE
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 17 DATE: 04/05/91 TIME: 1359 SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230



SCENE: **** NEGATIVES ****
SITE NAME: REEF (BURT CO.) SITE LOCATION: PORTLAND, MAINE
FRAME NUMBER: 18 DATE: 04/05/91 TIME: SKY CONDITION: CLEAR
PHOTO BY: T. SACCOCCIO WITNESSES: T. JONES ,M.E. STANTON
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 020230

VOC SAMPLING RESULTS

MARY ELLEN STANTON

US ENVIRONMENTAL PROTECTION AGENCY
60 Westview Street
Lexington, MA. 02173

DATE: 5/21/91

SUBJECT: REEF SITE
Samples Received: 55755, 55756, 54110 - TRIP BLANK
Samples Analyzed by GC/MS:Same

FROM: Steven Heller, ESAT Chemist, Joe Montanaro, EPA Chemist

TO: Mary Ellen Stanton, EEE

THRU: Dr. William Andrade WJA 5/23/91
Chief, Chemistry Section

PROJECT NUMBER: 910115

DATE(S) SAMPLES RECEIVED BY THE LABORATORY: 4/8/91

ANALYTICAL PROCEDURE: SW-846, 8240 Modified

Sample 55755:
A 100ul of the sample was weighed out into a 10ml volumetric containing approximately 9ml of pesticide grade methanol. The methanol extract was then diluted to a volume of ten ml.
A portion of the methanol extract was then diluted in organic-free water and then analyzed as per SW-846 3rd revision, Method 8240 Modified. Concentration is based on the weight analyzed.

Sample 55756:
The sample contained two phases, an oil phase, and a water phase. The water phase was analyzed according to SW-846 3rd revision, Met

QUALITY CONTROL:

1. A method blank was analyzed prior to sample analysis.

2. Each sample was spiked with three surrogate compounds at approximately 30 ppb concentration. The results for the surrogate recoveries are reported for each sample.

cc: Suresh Srivestava

DATA FILE: D:\LABRPTS\9100115DR.VOA

ANALYTICAL PARAMETERS
PURGEABLE ORGANIC ANALYSIS

INSTRUMENTS:	Tekmar ALS 2016 Tekmar LSC-2000 Finnigan INCOS-50
PURGE CONDITIONS:	
Gas:	Helium
Purge Time and Flow:	11 min.,40 ml/min
Trap:	25 cm stainles steel (1/8 in.OD) packed with 15 cm 60/80 mesh Tenax-GC plus 8 cm 35/80 mesh Davison type 15 Silica Gel
Desorption Time,Flow, Temperature:	4 min, 20ml/min.,180C
Bake out cycle:	12 min.
CHROMATOGRAPHIC CONDITIONS:	
Column:	30 meter long x 0.5 mm ID DB 624 mega-bore column
Program:	Initial 5 C ramped at 2 C/min to 10 C. Hold at 10 C for 5 minutes, then programmed at 6 C/min to 160 C and held for 1 minute.
Injector, Separator,and Transfer Temperatures:	220 C,220 C,220 C
Carrier Gas and Flow:	Helium, 30 ml/min
MASS SPECTROMETER CONDITIONS:	
Electron Energy:	70 V
Mass Range:	35,300
Scan Rate:	1.5 seconds

FACILITY SAMPLED: Reef Site

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS - Drum

SAMPLE NO.: 55755
SAMPLE LOCATION:

INSTRUMENT: INCOS-50

DATE OF ANALYSIS: 4/24/91
REFERENCE BOOK: 119
PRESERVATIVE: Cool to 4 C

SAMPLE RESULTS:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/gm)	Det. Limit (ug/gm)	Comments
		TARGET COMPOUNDS			
74-87-3	34418	Chloromethane	ND	128	
74-83-9	34413	Bromomethane	ND	64	
75-01-4	39175	Vinyl Chloride	ND	64	
75-00-3	34311	Chloroethane	ND	64	
75-09-2	34423	Methylene Chloride	ND	64	
75-69-4	34488	Trichlorofluoromethane	ND	64	
75-35-4	34501	1,1-Dichloroethylene	ND	64	
75-34-3	34496	1,1-Dichloroethane	ND	64	
156-60-5	34546	1,2-Dichloroethylene isomers	ND	64	
67-66-3	32106	Chloroform	ND	64	
107-06-2	34531	1,2-Dichloroethane	ND	64	
71-55-6	34506	1,1,1-Trichloroethane	ND	64	
56-23-5	32102	Carbon Tetrachloride	ND	64	
75-27-4	32101	Bromodichloromethane	ND	64	
78-87-5	34541	1,2-Dichloropropane	ND	64	
10061-02-6	34699	t-1,3-Dichloropropene	ND	64	
79-01-6	39180	Trichloroethylene	ND	64	
124-48-1	32105	Dibromochloromethane	ND	64	
10061-01-5	34704	c-1,3-Dichloropropene and/or 1,1-Dichloropropene	ND	64	
79-00-5	34511	1,1,2-Trichloroethane	ND	64	
71-43-2	34030	Benzene	ND	64	
110-75-8	34576	2-Chloroethylvinyl ether	ND	256	
75-25-2	32104	Bromoform	ND	64	
127-18-4	34475	Tetrachloroethylene	ND	64	
79-34-5	34516	1,1,2,2-Tetrachloroethane	ND	64	
108-88-3	34010	Toluene	ND	64	
108-90-7	34301	Chlorobenzene	ND	64	
100-41-4	34371	Ethylbenzene	ND	64	
107-02-8	34210	Acrolein	ND	1920	
107-13-1	34215	Acrylonitrile	ND	1920	
		Dichlorobenzene isomers	ND	128	
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	64	
67-64-1	81552	Acetone	ND	2560	
75-15-0	77041	Carbon Disulfide	ND	192	

(con't)

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS -SOIL

SAMPLE NO.: 55755
Sample Results Continued:

CAS NO.	STORET NO.	Compound	Conc. (ug/gm)	Det. Limit (ug/gm)	Comments
78-93-3	81595	2-Butanone (MEK)	ND	6400	
108-05-4	77057	Vinyl Acetate	ND	640	
591-10-6	77103	2-Hexanone	ND	64	
108-10-1	81596	4-Methyl-2-Pentanone(MIBK)	16,000	192	
100-42-5	81708	Styrene	ND	64	
133-02-7	81551	Xylenes (total)	ND	128	
		1,2-Dibromoethane	ND	64	
		Tetrahydrofuran	ND	640	
		Ethyl ether	ND	192	

Other Compounds
Tentatively Identified

Other Compounds Quantitated

Sample Recoveries for Surrogate Compounds:	Observed Recoveries	95%Confidence Limits
1,2-Dichloroethane,d4	78	70-133
Toluene,d8	86	88-98
1,4-Bromofluorobenzene	91	80-107

Notes:
ND=none detected
~=approximate
<=less than
>=greater than

FACILITY SAMPLED: Reef Site

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS - WATER

SAMPLE NO.: 55756
SAMPLE LOCATION:

DATE OF ANALYSIS: 4/24/91
REFERENCE BOOK: 119

INSTRUMENT: INCOS-50

PRESERVATIVE: Cool to 4 C

SAMPLE RESULTS:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/L))	Det. Limit (ug/L)	Comments
		TARGET COMPOUNDS			
74-87-3	34418	Chloromethane	ND	10.0	
74-83-9	34413	Bromomethane	ND	5.0	
75-01-4	39175	Vinyl Chloride	ND	5.0	
75-00-3	34311	Chloroethane	ND	5.0	
75-09-2	34423	Methylene Chloride	ND	5.0	
75-69-4	34488	Trichlorofluoromethane	ND	5.0	
75-35-4	34501	1,1-Dichloroethylene	ND	5.0	
75-34-3	34496	1,1-Dichloroethane	ND	5.0	
156-60-5	34546	1,2-Dichloroethylene isomers	ND	5.0	
67-66-3	32106	Chloroform	ND	5.0	
107-06-2	34531	1,2-Dichloroethane	ND	5.0	
71-55-6	34506	1,1,1-Trichloroethane	ND	5.0	
56-23-5	32102	Carbon Tetrachloride	ND	5.0	
75-27-4	32101	Bromodichloromethane	ND	5.0	
78-87-5	34541	1,2-Dichloropropane	ND	5.0	
10061-02-6	34699	t-1,3-Dichloropropene	ND	5.0	
79-01-6	39180	Trichloroethylene	ND	5.0	
124-48-1	32105	Dibromochloromethane	ND	5.0	
10061-01-5	34704	c-1,3-Dichloropropene and/or 1,1-Dichloropropene	ND	5.0	
79-00-5	34511	1,1,2-Trichloroethane	ND	5.0	
71-43-2	34030	Benzene	ND	5.0	
110-75-8	34576	2-Chloroethylvinyl ether	ND	20.0	
75-25-2	32104	Bromoform	ND	5.0	
127-18-4	34475	Tetrachloroethylene	ND	5.0	
79-34-5	34516	1,1,2,2-Tetrachloroethane	ND	5.0	
108-88-3	34010	Toluene	7.0	5.0	
108-90-7	34301	Chlorobenzene	ND	5.0	
100-41-4	34371	Ethylbenzene	ND	5.0	
107-02-8	34210	Acrolein	ND	150.0	
107-13-1	34215	Acrylonitrile	ND	150.0	
		Dichlorobenzene isomers	120	10.0	
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.0	
67-64-1	81552	Acetone	2000	200.0	
75-15-0	77041	Carbon Disulfide (con't)	ND	15.0	

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS - Water

SAMPLE NO.: 55756
Sample Results Continued:

CAS NO.	STORET NO.	Compound	Conc. (ug/L))	Det. Limit (ug/L)	Comments
78-93-3	81595	2-Butanone (MEK)	ND	500.0	
108-05-4	77057	Vinyl Acetate	ND	50.0	
591-10-6	77103	2-Hexanone	ND	5.0	
108-10-1	81596	4-Methyl-2-Pentanone(MIBK)	ND	15.0	
100-42-5	81708	Styrene	ND	5.0	
133-02-7	81551	Xylenes (total)	ND	10.0	
		1,2-Dibromoethane	ND	5.0	
		Tetrahydrofuran	ND	50.0	
		Ethyl ether	ND	15.0	

Other Compounds
Tentatively Identified

Other Compounds Quantitated

Sample Recoveries for Surrogate Compounds:	Observed Recoveries	95%Confidence Limits
1,2-Dichloroethane,d4	87	70-133
Toluene,d8	81	88-98
1,4-Bromofluorobenzene	100	80-107

Notes:
ND=none detected
~=approximate
<=less than
>=greater than

FACILITY SAMPLED: Reef Site

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS - WATER

SAMPLE NO.: 54110 - Trip Blank
SAMPLE LOCATION:

DATE OF ANALYSIS: 4/24/91
REFERENCE BOOK: 119

INSTRUMENT: INCOS-50

PRESERVATIVE: Cool to 4 C

SAMPLE RESULTS:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/L))	Det. Limit (ug/L)	Comments
		TARGET COMPOUNDS			
74-87-3	34418	Chloromethane	ND	2	
74-83-9	34413	Bromomethane	ND	1	
75-01-4	39175	Vinyl Chloride	ND	1	
75-00-3	34311	Chloroethane	ND	1	
75-09-2	34423	Methylene Chloride	ND	1	
75-69-4	34488	Trichlorofluoromethane	ND	1	
75-35-4	34501	1,1-Dichloroethylene	ND	1	
75-34-3	34496	1,1-Dichloroethane	ND	1	
156-60-5	34546	1,2-Dichloroethylene isomers	ND	1	
67-66-3	32106	Chloroform	ND	1	
107-06-2	34531	1,2-Dichloroethane	ND	1	
71-55-6	34506	1,1,1-Trichloroethane	ND	1	
56-23-5	32102	Carbon Tetrachloride	ND	1	
75-27-4	32101	Bromodichloromethane	ND	1	
78-87-5	34541	1,2-Dichloropropane	ND	1	
10061-02-6	34699	t-1,3-Dichloropropene	ND	1	
79-01-6	39180	Trichloroethylene	ND	1	
124-48-1	32105	Dibromochloromethane	ND	1	
10061-01-5	34704	c-1,3-Dichloropropene and/or 1,1-Dichloropropene	ND	1	
79-00-5	34511	1,1,2-Trichloroethane	ND	1	
71-43-2	34030	Benzene	ND	1	
110-75-8	34576	2-Chloroethylvinyl ether	ND	4	
75-25-2	32104	Bromoform	ND	1	
127-18-4	34475	Tetrachloroethylene	ND	1	
79-34-5	34516	1,1,2,2-Tetrachloroethane	ND	1	
108-88-3	34010	Toluene	ND	1	
108-90-7	34301	Chlorobenzene	ND	1	
100-41-4	34371	Ethylbenzene	ND	1	
107-02-8	34210	Acrolein	ND	30	
107-13-1	34215	Acrylonitrile	ND	30	
		Dichlorobenzene isomers	ND	2	
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1	
67-64-1	81552	Acetone	ND	40	
75-15-0	77041	Carbon Disulfide	ND	3	

(con't)

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS - Water

SAMPLE NO.: 54110 - Trip Blank
Sample Results Continued:

CAS NO.	STORET NO.	Compound	Conc. (ug/L))	Det. Limit (ug/L)	Comments
78-93-3	81595	2-Butanone (MEK)	ND	100	
108-05-4	77057	Vinyl Acetate	ND	10	
591-10-6	77103	2-Hexanone	ND	1	
108-10-1	81596	4-Methyl-2-Pentanone(MIBK)	ND	3	
100-42-5	81708	Styrene	ND	1	
133-02-7	81551	Xylenes (total)	ND	2	
		1,2-Dibromoethane	ND	1	
		Tetrahydrofuran	ND	10	
		Ethyl ether	ND	3	

Other Compounds Tentatively Identified

Other Compounds Quantitated

Sample Recoveries for Surrogate Compounds:	Observed Recoveries	95%Confidence Limits
1,2-Dichloroethane,d4	77	70-133
Toluene,d8	91	88-98
1,4-Bromofluorobenzene	31	80-107

Notes:
ND=none detected
~=approximate
<=less than
>=greater than

METALS SAMPLING RESULTS

4/15/91

XRF-86

date: 4/9/91

re: XRF Screening Report of Reef Site
Project # 910115

from: Dr. T. M. Spitter

to: Dr. William Andrade and Site Manager

6 samples were submitted for screening for heavy metals using the Kevex XRF analyser. Samples were homogenized and an aliquot was analysed using the HNu XRF instrument. All samples were found to contain no elements above normal background in soil except for the following:

Sample #	Field ID	Pb	Cu	Ba
13721	62903			
13722	55757	2000		v. High
13723	62516			
13724	55760			
13725	55758		10%	
13726	55759			

OIL ID RESULTS

Fin
5/3/91

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
60 WESTVIEW STREET, LEXINGTON, MASSACHUSETTS 02173

DATE: April 30, 1991

SUBJ: Comparison of Petroleum Oils by Gas Chromatography - Reef Site

FROM: Nathan Rianes, Deb Thiem and Dick Siscanaw, Chemistry Section

THRU: Dr. William J. Andrade, Chief, Chemistry Section
WJA 5/2/91

TO: Dorothy Girten

PROJECT NUMBER: 910115

ANALYTICAL PROCEDURE:

The samples were prepared by the ASTM Method 3326, Practice for Preparation of Samples for Identification of Waterborne Oils and ASTM Method 3328, Method for Comparison of Waterborne Petroleum Oils by Gas Chromatography. The standards along with the samples were diluted with cyclohexane and analyzed on a Hewlett Packard 5880 gas chromatograph equipped with a flame ionization detector.

Date(s) Samples Received by the Laboratory: 4/8/91

Date(s) Samples Analyzed: 4/15 - 25/91

File: K:\CHEMSTRY\REPORTS\FINAL\9101150I.OIL

US ENVIRONMENTAL PROTECTION AGENCY
60 Westview Street
Lexington, MA 02173

QUALITY CONTROL:

1. A laboratory blank was analyzed with the samples.
2. Duplicate analyses were performed on the following sample(s): 55756.

RESULTS:

Qualitative Comparison (visual comparison of chromatograms):

Sample		
55756	Motor oil 30	- Match
55756 duplicate	Motor oil 30	- Match

SAMPLES ANALYZED: 55756

US ENVIRONMENTAL PROTECTION AGENCY
60 Westview Street
Lexington, MA 02173

DEFINITIONS:

Match - Identical data or data showing minor differences attributable to weathering.

Probable Match - Similar data showing moderate differences attributable to weathering and/or contamination.

Indeterminate - Data showing excessive differences that might be attributable to weathering and/or contamination or might be attributable to a similar oil from a different source.

Mismatch - Dissimilar data.